RAC TCA
The Canadian Amateur

Canada's Amateur Radio Magazine

La Revue des Radioamateurs Canadiens

JULY / AUGUST 2014 – JUILLET / AOÛT 2014

FT5ZM Amsterdam Island 2014

Publications Mail Agreement # 40028682 Registration # 09866

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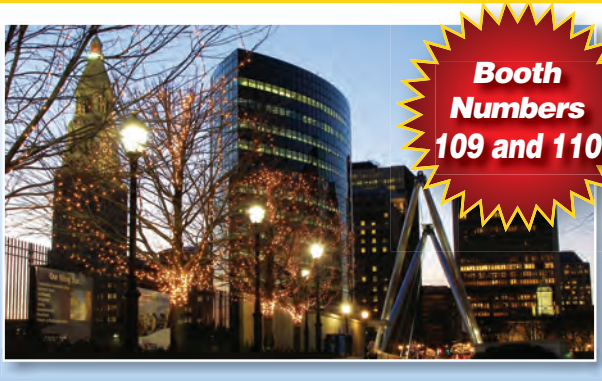

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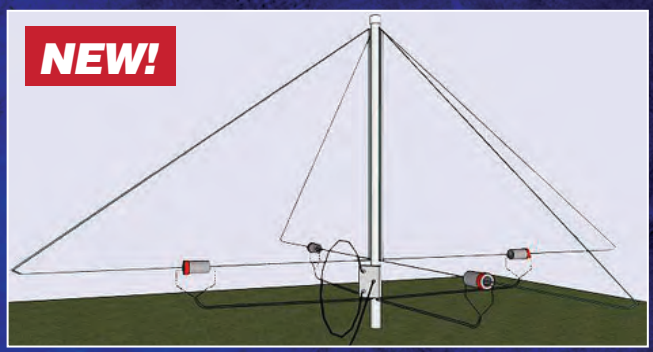

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Array Solutions' products are in use at top DX and Contest stations worldwide as well as commercial and governmental installations. We provide RF solutions to the DoD, FEMA, Emcomm, UN, WFO, FAA and the State Dept. for products and installation of antennas systems, antenna selection, filtering, switching and grounding. We also offer RF engineering and PE consulting services.

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Photo by Nodir, EY8MM: "One of our yagis at Mataf with the Milky Way in the background."

"Due to the rarity of some of the Southern French possessions, Amsterdam Island became an Island of choice since it was well within the top most wanted DXCC entities worldwide ranking about number 4 or 5." (see page 30)

TECHNICAL

NATIONAL & INTERNATIONAL

WHAT'S NEW ON THE "COMMUNICATIONS" FRONT AT RAC?

I'm happy to report that our social media platform membership numbers keep rising steadily. The RAC Facebook has well over 3,000 members and the Twitter account is seeing growth as well. I do appreciate the feedback from our members on how RAC uses these platforms for communicating information. A broad range of items are broadcasted through these channels such as special events, fleamarkets, new member announcements, RAC bulletins, club newsletters, contest information as well as individual member submissions. As mentioned previously, using these methods provides a cost effective and near spontaneous timeline to communicate with our target audience.

I am well aware of the fact not everyone embraces the use of social media and this is why we continue to use our traditional channels such as the RAC website, the bulletin system and TCA magazine. The transition to our new website (wp.rac.ca) continues and RAC Communications has begun using it to post news items and bulletins. Consequently, the old website will not be used for that purpose going forward.

Not receiving RAC bulletins by email? You might want to resubmit your information using this site: http://rac.eton.ca/racbullemail.htm.

RAC Facebook: https://www.facebook.com/groups/2624005010/ – RAC Twitter: @RACTWEETS

Vincent Charron, VA3GX/VE2HHH – RAC Director of Communications and Fundraising
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OPERATING

DEPARTMENTS

PLEASE SUPPORT OUR ADVERTISERS

The Canadian Amateur is published in Canada six times per year to provide Radio Amateurs, those interested in radio communications and electronics, and the general public with information related to the science of telecommunications.

Articles, reviews, letters, features, suggestions, photographs and essays are welcomed. Manuscripts should be legible and include the contributor's name, call sign, phone number(s) and addresses (mail, email and packet, as applicable).

For a complete Author's Guide visit: http://www.rac.ca/authors_guide.htm

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The Canadian Amateur, publié six fois par an, est destiné à fournir aux radioAmateurs, à toute personne intéressée à la radio et à l'électronique et au grand public, des informations de toute nature relatives à la science des télécommunications.

Nous acceptons avec plaisir tout article, étude, suggestions, photos et lettres. Les manuscrits soumis doivent être lisibles et porter le nom de l'auteur, son indicatif, son ou ses numéros de téléphone ainsi que ses adresses postales, courriel et paquet s'il y a lieu. Si vous avez envie d'écrire pour *TCA :* http://www.rac.ca/authors_guide.htm

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THE RAC QSL BUREAU SYSTEM

The **RAC Outgoing QSL Bureau** service is available to RAC members, RAC affiliated clubs (club call only) and QSL Managers who are members of RAC. Your RAC membership number must accompany each shipment of QSL cards.

RAC Outgoing QSL Bureau
PO Box 11156, Station H
Nepean, ON K2H 7T9
Telephone: 613-670-3230
Email: ve3exy@rac.ca

There are limits and restrictions for use of the Outgoing QSL Bureau. For more information, surcharges and card sorting details, visit http://www.rac.ca or http://www.magma.ca/~ve3exy/bureau.html.

The **Incoming QSL Bureau** service is a user-pay system, using one of four methods – (**A**) envelopes (**B**) credits (**C**) labels or (**D**) combination credit with labels – to get cards to you. For more information on the incoming system visit www.rac.ca. ***(*Note: Method B is preferred).***

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Whitehorse, YT Y1A 5Y5

Silent Keys – In Memoriam

With regret, we record the passing of these Amateur Radio operators.
Nous avons le regret de vous annoncer le décès des radioamateurs suivants.

VA3ABL – Norm Ferguson, of Caledon, ON, at age 72, on April 7, 2014.
VA3ES – Ed Sieb (VE2BAQ) of Ottawa, ON, on March 20, 2014.
VA3LVN – Alvin Guy, of Fort Erie, ON, at age 74, on March 5, 2014.
VA3MVK – Miko (Mike) Krumov, of Markham, ON, at age 58, on March 14, 2014.
VA3NNH – Neil Hobart, of Burlington, ON, at age 87, on April 21, 2014.
VA5RKL – Roy Leonard, of Regina, SK, at age 91, on March 25, 2014.
VE1CAF – Don Wilcox, of Dartmouth, NS, at age 88, on October 8, 2013.
VE1CD – Claude d'Entremont, of Lower Argyle, NS, at age 63, on May 6, 2014.
VE3DAM* – Clare McKerrow, of Ottawa, ON, at age 94, on March 24, 2014.
VE3DLJ – Douglas Lackey, of Ottawa, ON, on March 8, 2014.
VE3LNQ – Victor Linard, of Scarborough, ON, at age 87, on May 28, 2014.
VE3MSL – Fritz Lamorie, of Arnprior, ON, at age 95, on May 16, 2014.
VE3ODA – David Armishaw, of Ottawa, ON, at age 56, on April 27, 2014.
VE3ON – Norman Lawton, of Pickering, ON, at age 93, on February 14, 2014.
VE3QIZ – Laura Bailey, of Bellwood, ON, age 53, on April 7, 2014.
VE3SKP – Steve Price (VE1RDX) of Kemptville, ON, at age 55, on March 21, 2014.
VE3UXW – Alfred Gay, of Brampton, ON, at age 87, on July 4, 2013.
VE3XZS – Johan Jordaan, of Vaughan, ON, at age 58, on March 14, 2014.
VE4BMF – Bruce Folkett, of Winnipeg, MB, at age 68, on April 23, 2014.
VE4LES – Les Holm, of Gimli, MB, on May 7, 2014.
VE5DZ – Jean Lalonde, of Melfort, SK, at age 66, on April 14, 2014.
VE6AXL – Ernie Lupack, of Edmonton, AB, at age 72, on March 7, 2014.
VE6BLO – Elmer Lodmell, of Edmonton, AB, at age 95, on July 4, 2013.
VE6URI – James Leslie Reid (VA7KCR) of Edmonton, AB, at age 95, on March 17, 2014.
VE6WGB – George Berg, of Enilda, AB, at age 93, on March 10, 2014.
VE7CJJ – Harvie Roberts, of Richmond, BC, at age 91, on September 18, 2013.
VE7CZY – Jeff White, of West Vancouver, BC, in April 2014.
VE7DLA – Tosh (Maggi) Miyagawa, of Burnaby, BC, at age 96, on March 11, 2014.
VE7FN – Anges Martinsen, of Barriere, BC, at age 90, on January 10, 2013.
VE7FQJ – Bill Seymour, of Port Moody, BC, at age 89, on April 4, 2014.
VE7FYH – David Brant, of Kelowna, BC, at age 85, on April 16, 2014.
VE7JVC – Ed Curell, of Terrace, BC, at age 66, on March 6, 2014.
VE7TIS – Noel McClelland, of Salmon Arm, BC, at age 79, on May 22, 2014.
VE7ZAV – Duncan Zavislake, of Vernon, BC, at age 63, on December 21, 2012.
VE9WP – Wilfred Pond, of Miramichi, NB, on April 27, 2014.

*Note: In the above list an * indicates that a call sign has been reissued.*
The list of Silent Keys is prepared by volunteers at RAC Headquarters at <rachq@rac.ca>.

RAC APPOINTS IAN MACFARQUHAR, VE9IM AS ARISS REGIONAL REP

RAC is pleased to advise that Ian MacFarquhar, VE9IM, will be our RAC appointment as the ARISS regional representative. He will replace Daniel Lamoureux, VE2KA.

"Mr. MacFarquhar has been Vice-President, supervised the successful insurance program and has been a pillar in RAC for longer than he cares to remember." – says Geoff Bawden VE4BAW, RAC President.

ARISS website: http://www.ariss.org/

RAC comms – wp.rac.ca

IAN MACFARQUHAR, VE9IM, NOMMÉ REPRÉSENTANT RAC – ARISS

RAC est fière d'annonçer que Ian MacFarquhar VE9IM sera le représentant régionale au sein de l'organisme ARISS (station radioamateur de la station spaciale internationale). Il remplacera Daniel Lamoureux VE2KA.

"Mr. MacFarquhar fût auparavant et longtemps un pionner avec RAC occupant role de vice-président et a aussi géré le programme d'assurances RAC." souligne Geoff Bawden VE4BAW, président RAC.

RAC comms – wp.rac.ca

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Join RAC or renew your membership at: https://www.rac.ca/en/rac/membership/form/

Find us at @RACTWEETS on Twitter or search for "RAC" on Facebook.

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See pages 58-62 for Section Reports.

A MESSAGE FROM THE PRESIDENT / UN MESSAGE DU PRÉSIDENT

Geoff Bawden, VE4BAW
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It was a very busy spring and summer for Radio Amateurs of Canada.

We met with Industry Canada through the Canadian Amateur Radio Advisory Board (CARAB), went to Dayton to profile ourselves in what is arguably the largest assembly of Amateurs in the world (and Canadians are the second largest contingent at Dayton) and our newest RAC Director committed to championing and delivering a new education program for those who want to be hams.

We obtained the ability to use 60 metres – this has been a goal of RAC for some time. Preparation work continues on WRC-15 as RAC has been in Geneva, Switzerland as part of the Canadian delegation working on obtaining an international allocation for 60 metres.

Our success internationally at WRC-12 was recognized at home by the addition of 472 to 479 kHz for use by Amateurs (see the article on page 16).

The feds consulted on antenna placement across Canada and assured us that the consultation was triggered by concerns over commercial antenna placement and not issues arising from Amateur installations. RAC is watching to ensure that the “law of unintended consequences” does not hamper nor eliminate our “virtual exemption” to erect antenna support structures to 15 metres.

By the time this comes out in print, your President will have gone to Alberta and met with hams across the Province and as well congratulated the many hams that worked hard to support their communities through the disastrous floods.

In July, RAC will be in Connecticut to help celebrate the 100th anniversary of the American Radio Relay League (ARRL). RAC will have a booth at its Centennial Celebration and RAC Director Bill Unger, VE3XT, will be giving a technical seminar on digital controls and is determined to operate W1WW. All hams will want to congratulate the ARRL on its 100th year of operation and its incredible contributions in the development and preservation of Amateur Radio. Perhaps we will see you there. Tell your American friends to buy a RAC membership.

In July, RAC will also be in New Westminster, British Columbia for our Annual General Meeting. I will be pleased to formally announce that RAC finished in the black for the third year in a row (2011, 2012 and 2013) and has tabled our 2013 financial statement. A reminder: until the end of the second quarter of 2012 RAC was insolvent (bankrupt) and had been insolvent since before 2010, and would have failed in 2010 or 2011 without some dramatic changes. RAC, while now solvent, is still fiscally fragile. A good Balance Sheet does not guarantee a high performing organization but a bad Balance Sheet guarantees failure.

Ce fut un printemps et un été très occupés pour Radio Amateurs du Canada.

Nous avons rencontré Industrie Canada via Canadian Amateur Radio Advisory Board (CARAB); sommes allés à Dayton y faire valoir notre présence à ce qu’il est convenu d’appeler la plus grande assemblée d’amateurs au monde (et les Canadiens forment le deuxième plus important contingent à Dayton); confier à notre plus récent directeur le soin de préparer et de défendre un nouveau programme éducatif destiné à ceux et celles qui veulent devenir amateur(e)s.

Nous avons obtenu le droit d’utiliser le 60 mètres – un objectif de RAC depuis un bon bout de temps. Le travail de préparation en vue de la WRC-15 se poursuit et RAC s’est rendu à Genève en Suisse à titre de membre de la délégation canadienne qui travaillait à obtenir l’allocation internationale du 60 mètres.

Notre succès international à la WRC-12 a permis, chez-nous, l’ajout des fréquences de 472 à 479 kHz pour usage amateur (voir l’article à la page 17).

Les représentants fédéraux ont tenu une consultation sur l’emplacement des antennes au Canada. Ils nous ont assurés que la consultation a été lancée sur les enjeux de l’emplacement des antennes commerciales et non sur ceux touchant les installations amateures. RAC est aux aguets pour s’assurer que la « loi sur les conséquences non voulues » (law of unintended consequences) ne vienne gêner ou éliminer notre droit d’ériger des structures d’antenne jusqu’à 15 mètres.

Avant que cette garantie ne soit mis sur papier, votre président se sera rendu en Alberta et aura rencontré des amateurs de la province en plus de féliciter ceux et celles qui se sont dévoué(e)s dans leur communauté pour combattre les conséquences désastreuses des inondations.

En juillet, RAC se rendra au Connecticut pour aider aux célébrations du 100e anniversaire de l’ARRL (ARRL). RAC aura un comptoir à la célébration du centenaire et le directeur Bill Unger, VE3XT, prononcera un séminaire technique sur les contrôles numériques; il utilisera l’indicatif W1WW. Tous les amateurs voudront féliciter l’ARRL pour ses 100 ans d’opération et son incroyable contribution au développement et à la préservation de la radio amateur. Peut-être aurions-nous le plaisir de vous y voir! Dites à vos amis(e)s de prendre leur carte de membre de RAC.

En juillet, RAC sera aussi à New Westminster, Colombie-Britannique pour la réunion générale annuelle. Je serai heureux d’annoncer formellement que RAC a terminé l’année financière à « l’encre noire » pour la troisième année consécutive (2011, 2012 et 2013) et déposé notre état financier pour 2013. À se rappeler : jusqu’à la fin du deuxième trimestre de 2012, RAC était devenu insolvable (faillite) et l’était même avant 2010. Il aurait fait officiellement faillite en 2010 ou 2011 sans changement important. Maintenant solvable, RAC est encore fragile sur le plan fiscal. Un bon rapport financier ne garantit pas une bonne performance de l’organisation, mais un mauvais mène à la faillite.

Nos finances sont plus fiables qu’il y a dix ans et le nombre de membres de RAC s’est stabilisé. RAC a obtenu de nouvelles fréquences, démontré du leadership et renversé des décisions de la Loi sur la conduite inattentive partout au Canada.

Our finances are more secure than they have been in a decade and RAC's membership has stabilized. RAC has delivered new frequencies, shown leadership and defeated distracted driving legislation across Canada.

In addition, RAC argues for antenna rights for Amateurs and continues to show leadership internationally. If you can help get out the story of our effective action we will attract even more members and become more effective.

We initiated a new program in late 2013 to make it easy for those newly certified Amateurs to join RAC by providing a free year of membership. Statistics that Industry Canada shares with us show that the number of Canadian Radio Amateurs is growing faster than the Canadian population. There are more Amateurs than ever. We need them to join their national society.

RAC volunteers take the lead on everything RAC does: TCA and the RAC website; RAC contests and QSL Bureaus; the RAC Insurance Program; advice to clubs and members on regulatory issues; representing Canadian Radio Amateurs to federal and provincial governments; administering scholarships and supporting Amateur related school activities.

If you are interested in helping RAC build Amateur Radio in Canada please contact me or your Regional Director.

Geoff Bawden, VE4BAW
RAC President and Chair

De plus RAC s'active en faveur des droits des amateurs en matière d'antenne et continue de démontrer du leadership sur le plan international. Si vous pouvez nous aider à faire connaître l'historique de nos actions, cela nous permettra d'attirer encore plus de membres et de devenir encore plus efficace.

Nous avons lancé un nouveau programme à la fin de 2013 pour faciliter la venue de nouveaux amateurs chez RAC en garantissant une année gratuite comme membre. Des statistiques qu'Industrie Canada partage avec nous, démontrent que le nombre de radioamateurs canadiens croît plus vite que la population canadienne. Il y a plus d'amateurs que jamais. Nous devons faire en sorte qu'ils joignent leur société nationale.

Ce sont les bénévoles qui orientent l'action de RAC : TCA et le site internet de RAC; concours et Bureaux QSL; programme d'assurance de RAC; avis aux clubs et aux membres sur les enjeux règlementaires; représentation des amateurs canadiens auprès des gouvernements fédéral et provinciaux; administration de bourses d'études et soutien aux activités des radioamateurs de concert avec l'école.

Si vous êtes intéressé à aider RAC et à faire avancer la cause radioamateure au Canada, s.v.p. communiquez avec moi ou avec votre directeur régional.

Geoff Bawden, VE4BAW
RAC Président-directeur général

– Traduction par Claude Lalande, VE2LCF

RAC VOLUNTEER RECOGNITION
RECONNAISSANCE DE BÉNÉVOLE RAC

This year marks 20 years of true continuous volunteer dedication RAC wishes to highlight. The dedication from our volunteers is what brings success to many aspects of our organization.

In 1994, Jacques Dubé, VE2QK, took over the VE2 QSL Incoming Bureau from Albert Daemen, VE2IJ. Jacques has been handling the Bureau on his own since his wife passed away in 1996.

Cette année marque 20 années de bénévolat continue dont RAC aimerais souligner. L'engagement de nos bénévoles rapporte beaucoup de succès dans plusieurs aspects de notre organisation.

En 1994, Jacques Dubé, VE2QK, pris les commandes du bureau QSL VE2 de Albert Daemen VE2IJ. Depuis le décès de son épouse en 1996, Jacques assume tout le travail seul.

Jacques ayant travaillé à Postes Canada pendant 33 années, a réussi à se procurer deux racks de triage qui sont maintenant utilisé pour trier les cartes.

À date, Jacques a traité au-delà de 600,00 cartes QSL et utilise des petits programmes qu'il a conçus pour gérer le tout y compris les crédits.

Jacques a fait ses débuts en radioamateur en 1987 sous les l'indicatif VE2JAD et suite à l'obtention de la licence supérieure en 1988 détiens le VE2QK.

De la part du RAC et de tous ceux qui bénéficie de ton acharnement au bureau QSL VE2: Un gros Merci!

Jacques worked at Canada Post for 33 years and was able to secure two mail sortation racks that are now being used to sort cards. To date Jacques has handled well over 600,000 QSL cards and uses his own programs to manage the Bureau, credits etc.

Jacques was first licensed as an Amateur in 1987 with call sign VE2JAD and he obtained his Advanced in 1988 then changed calls to VE2QK. No longer owning a station Jacques remains active using Echolink and is also an administrator with Hamsphere.

From RAC and all those who benefit from your dedication to the QSL VE2 Bureau: Thank you!

The Niagara Peninsula Amateur Radio Club recently made a donation to the NHS Walker Family Cancer Centre in St. Catharines, in memory of deceased member, Brydon Skitch, VE3ABO. Club excutives David Jarman, VE3RNF (left) and Peter Timinski, VA3WET, hand cheques to Courtney Mcloughlin (left) and Kristina Manzi, of the Niagara Health System Foundation. NPARC has over 70 members and was established in 1948. (Photo by Denis Cahill, VA3ONO)

SIX METRES AND DOWN

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2014 SPORADIC E SEASON

Generally speaking, late Spring and Summer are the times when 50 MHz operators make DX hay with contacts via Sporadic E.

This mode of propagation is typically supported by patches of ionization in the E layer of the ionosphere about 90 kilometres above ground.

Think of the ionization as sheets or curved plasma balls that can reflect in a straight line or off on an angle.

Sometimes a small yagi with a high takeoff angle will work very well, and at others a single big yagi or stack of yagis will support DX.

These "clouds" of ionization are driven by the upper atmospheric winds and the earth's rotation and generally move from east to west with the noon time sun.

However, over the years we have experienced E skip at 10 pm EST into the west coast of Africa or into California, so there are exceptions to the "rules".

50 MHZ PROPAGATION SEASON ARRIVES...

Because you are operating at or near the Maximum Useable Frequency (MUF) with Es, often propagation losses are very small so even QRP stations sound like "big guns". The key, of course is to be there to enjoy the DX and make the most of propagation on the "Magic Band".

Happily, the nasty, wet, snowy weather is gone at this writing, replaced by warm sunny weather, ideal for tower work and general ham radio hijinks. Of course other duties get in the way, but fortunately there are enough Canadians on the magic band to keep things interesting.

March 30 brought a brief opening to FN03, with AD5A worked at 2352 UTC. However, since then the east stayed pretty quiet, while out west the propagation was wild.

The season opener was reported by John, VE7DAY, on May 5 who writes:

"Well I heard JE1BMJ very weakly with a high noise level here.

Worked KL7KY in BP51 at 23:58 and spent the rest of the opening listening for BV2DQ."

VE7DAY reported a major north/south opening that included KL7KY in BP51, W6XL, K6HCP, KD6SW, W6QUB, N6EE, N6ORG, WA7GCS, K6CS, KK6OB, K6OAK, AE7YU,K6ML, W6SJR, NR7T, N3AIU, XE2CQ and more from May 6 to May 8.

John further wrote:

"A most interesting contact for me on the 21st as Steve, VE7SL, mentioned he had a beacon on our new band, 476.000 kHz.

I listened with my 9-element LFA for six and there it was, not strong but Q5. Steve mentioned he had worked another VE7 and I suggested we could try crossband on six. We did it first try 529, so I was pretty happy to work our new band if only crossband.

May 21 through May 23, I worked CM79, CM87, CM88, CM89, CM96, CM97, CM98, DM02, DM04, DM13, DM26, DM79 and DN40.

Also W1AW/0 in Colorado on six metres. A lot of the time I was listening for JE1BMJ, JL8GFB and BV2DQ who were calling and listening NA. I heard light CW but not enough to identify.

I received an email from I2FAK on April 15 requesting a try on two metres EME.

We set up a sked and tried for four days, or should I say early mornings, around 03:00 and later each morning as our moon positions matched. I saw his trace on the scope but we did not complete.

Franco suggested we try again in May when the moon was in a good position for us.

Our first try on May 22 was not fruitful, but this morning, May 23, I watched as he tried to work another station and saw his trace.

He said he'd call me next.

We tried for about an hour during which I received many decodes of his signal and when I was just about to give up, there were his signals with my report RO. I was elated.

We completed the contact with his '73' and it's in the log for a two metre EME QSO. Not my first but it felt exciting just the same. Well worth the loss of sleep."

John also mentions:

"May 9 03:52 KL7NO BP54 55 in for over an hour.

04:32 JL8GFB heard 519 for about 10 mins in and out.

05:15 KL7KY BP51 559 in for over an hour.

I think VE7SL worked JL8GFB and the AK stations as did some in Washington State and at least one in California.

There were at least a couple more AK stations on but I was listening intently for JA."

May 10 was a hugely interesting day back east with a fantastic Es contact with ZD7VC on St. Helena Island worked by VE3JVG, VE3EK and a number of other excited VEs.

A big congrats to VE3JVG who worked ZD7 with 100 W and a 3-element yagi!

Later that day, VE3KU heard TJ3SN working the East Coast pileup, but signals didn't get strong enough to get through. TJ3SN runs a beacon 24/7 pointed toward North America so keep an ear tuned to 50.027 MHz. ZD7VC runs a beacon on 50.007 MHz that has been widely heard in VO1, VE1 and VE2-land this year.

Things didn't really got going until May 11, however, with a Es opening connecting to TEP. Among the contacts worked were: CX5BL, L2FP, LU4FPZ, LU8ADX, LU9AEA, LU6CRV, LU2AW, PV8ADI, XQ6UMR, CE6SAX, J69MV, LU8DO and PP1CZ – all between 2103 and 2209 UTC. The band opening was widespread and many other VE3s were heard in the fray including VE3EJ, VE3FGU, VE3EY and VA3FF.

There was also an intense double-hop opening into 7-land on May 25, with N7AMA, K7GZB, K7WLF, KD7GC, N7EL, WW7B, W7GNE, AL7DL, K1JD worked covering DM42, 22, 33 and 43.

DAYTON HAMVENTION 2014

I hitched a ride with Peter, VE3AX/7, who was in town visiting family, and the boyz headed for Dayton, Ohio. Peter and I go back to high school when we met on 40m CW in May 1969. That connection has stayed over the intervening 45 years with many shared adventures in VHFing, contesting and EME.

Dayton was fun this year, despite the rain, cold, wind and hail. I thought the fleamarket was pretty well stocked and I managed to get everything that I needed on my shopping list. Of major note was the preponderance of high power solid state amplifiers for 50 MHz and up appearing. I was lucky enough to pick up some surplus SSPAs for 902 MHz so we will be able to enhance our presence on 33 cm.

The technology is moving fast and I just have to shake my head at the simplicity of the technology. I don't think it will be much longer before we can kiss the old trusty vacuum tube amplifier goodbye and replace it with a smallish box and lightweight power supply.

Software defined radios abounded this year as well. Some were very sophisticated transceivers covering HF and VHF. Now if we only had this stuff 40 years ago!

Speaking of 40 years ago, we also attended the Collins Dinner and the Drake Dinners. They are sponsored by the keen collectors who have spawned a grassroots industry to keep and maintain those radios of yesterday. The guys even had the "Collins Van" at the dinner, with a complete S line including the 62S1 transverter!

Here is a photo of the big amp on 144 MHz from Communications Concepts. Hi. 1500 watts key down all day and all night…sweet!

We also had a chance to drop by the RAC booth and chat with Prez Geoff, VE4BAW, as well as Ken, VE6AFO. We also visited with ARRL CEO Dave, K1ZZ and Larry, W4RA plus IARU Prez Tim, VE6SH!

CQ WW VHF

A really fun contest is run by *CQ Magazine* in July.

The CQ WW VHF Contest starts at 1800 UTC on Saturday, July 19 and runs through 2100 UTC on Sunday, July 20.

This contest is only 50 and 144 MHz and you can submit for a singleband or both. Details are on the CQ website at: http://www.cqww-vhf.com

AUGUST CONTESTS

Don't forget the upcoming ARRL contests in August.

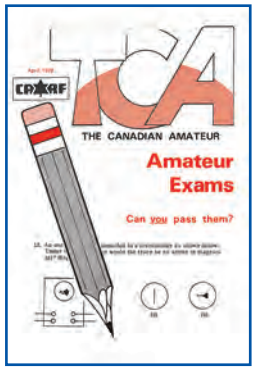
The ARRL 10 GHz Contest is held on August 16-17 and September 20-21 at 0600 Saturday local to 2400 Sunday local.

The ARRL UHF Contest is held on August 2-3 from 1800 Saturday to 1800 Sunday – 222 and MHz up. For more contest information see the Contest Calendar on page 57.

– 73, Dana, VE3KU/VE3DSS

REFLECTED SIGNALS: TCA 1979

Mike Kelly, VE3FFK



The main themes of the year were WARC and EXAMs. The Digital licence, a no-code experiment, was launched. Forty people wrote the new digital exam. Only 12 weren't Amateurs before they wrote. Of those dozen newcomers to Amateur, only three passed. Complaints about all three exams (Amateur, Advanced and Digital), and complaints about the complainers filled the pages all year, with the Department of Communications making some changes in the end. For one, people would be allowed to bring in digital calculators, provided they were non-programmable.

The World Administrative Radio Conference (WARC) was the other big topic of the time. It's coming... There are rumours of reductions, additions and changes to the Amateur spectrum. Then... It's over, and it's good news for hams.

There was talk of Amateurs cooperating with the Coast Guard Auxiliary to form a "Canadian Marine Rescue Auxiliary" service. At the same time, it seemed that pleasure craft operators were abandoning CB for VHF Marine and making a mess out of that spectrum. To reward this behaviour (and get them out of the hair of the commercial ship operators), it was proposed to have them share the 220 band with us.

In other commercial happenings, Northern Electric with Bell Northern Research was working on a telephone built around a single integrated circuit. Bell also raised objections to cable company experiments with two-way signalling on their coax TV cables, complaining that this was not a "broadcast" service. Early experiments were underway with direct to home satellite television, via the Hermes and ANIC B satellites.

There was lots of technical activity on the Amateur side too, with hams in Hamilton experimenting with packet radio at 4800 baud "ten times faster than RTTY". Meanwhile, the RTTY crowd was experimenting with automatic storage and forwarding of messages using a computer connected to their HF radios and TTYs.

There was an article explaining what wire wrap was all about.

There was an entire series on wire antennas, and another shorter series by Jack Belrose, VE2CV, about the J-Pole in various forms. There were propagation experiments during the solar eclipse. There was EME activity in the West and a DXpedition to Sable Island in the East.

For Amateurs looking for smaller projects, there was a junkbox transmitter built around a 6L6, a twin T audio oscillator, a VHF DF loop and, as always, a code practice oscillator.

— NOTICE —

RADIO AMATEURS OF CANADA INC.

The Radio Amateurs of Canada is pleased to hold its Annual General Meeting (AGM) in New Westminster, British Columbia. The AGM event will be hosted by the Orca DX and Contest Club and will be held in conjunction with the 59th annual Vancouver 2014 Pacific Northwest DX Convention which is being held at the same location. All RAC members are encouraged to attend the Annual General Meeting.

Date: Sunday, July 27, 2014 after the DX Convention.

Time: 12 noon (Pacific)

Place: The Annual General Meeting will be held at the Inn at the Quay, 900 Quayside Drive in New Westminster, British Columbia (see below for more information).

Agenda items will include:

- Report of the President
- Review of the 2013 finances
- Appointment of auditors for 2014
- Amendment to RAC Constitution (see the right column)

A Question and Answer period will follow the AGM proceedings.

This is your opportunity to hear what your representatives have been doing over the past year, to raise questions, and to make suggestions about how RAC is managed and where it is going in the future.

The meeting will be attended by some of the members of the RAC Board of Directors and Executive and is open to all RAC members. In addition there will be a planned Webinar which RAC members can attend remotely.

For more information on the Pacific Northwest DX Convention please see the article below or visit:

http://orcadxcc.org/vancouver2014/home.html

2014 PACIFIC NORTHWEST DX CONVENTION

The Orca DX and Contest Club is pleased to host the Annual General Meeting of Radio Amateurs of Canada as part of the **59th annual Vancouver 2014 Pacific Northwest DX Convention**.

The Convention will be held from July 25-27 at the beautiful Inn at the Quay in New Westminster, British Columbia, just 25 minutes by SkyTrain southeast of downtown Vancouver and 20 minutes north of the “Peace Arch” BC-Washington border crossing.

Highlights include:

- a great program of notable DXpeditioners
- a super prize package
- one of the most picturesque settings ever to host this annual gathering of DXers

The theme of the Convention is “**Remember the Magic**”. Come to the event and reawaken the feeling of discovering Amateur Radio for the first time – and especially for DXers, the excitement of making contacts all over the world and the “magic” of how that actually happens.

The program is still being developed and will be updated regularly on our website. We are planning an extraordinary time for all attendees. DXers will enjoy a riveting lineup of presentations and seminars, and plenty of prizes to make things even more interesting. For your non-DXer companions, New Westminster offers a wealth of activities and sights to see, and downtown Vancouver is nearby.

For more information please visit:

http://orcadxcc.org/vancouver2014/home.html

CONSTITUTIONAL CHANGE NOTICE

The new *Canada Not-for-profit Corporations Act (NFP Act)* establishes a new set of rules for federally incorporated not-for-profit corporations in Canada. To make the transition to the *NFP Act*, a federally incorporated not-for-profit corporation will need to replace its letters patent, supplementary letters patent (if any) and by-laws with a Certificate of Continuance (attached to which are the corporation’s articles) and new by-laws that comply with the *NFP Act*.

It is the recommendation of the RAC Board of Directors that:

Continuing the Corporation under the provisions of the *Canada Not-for-profit Corporations A*ct and authorizing the Directors to apply for a Certificate of Continuance.

WHEREAS the Corporation was incorporated under Part II of the *Canada Corporations Act* by Letters Patent dated 2nd day of October, 1992; and

[WHEREAS those Letters Patent were amended by Supplementary Letters Patent dated 27th day of July, 2014; and]

WHEREAS it is considered to be in the best interests of the Corporation that it be continued under the *Canada Not-for-profit Corporations Act (NFP Act)* pursuant to section 297 of the *NFP Act*;

BE IT RESOLVED AS A SPECIAL RESOLUTION THAT:

1) The Directors of the Corporation are authorized and directed to make an application under section 297 of the *NFP Act* to the Director appointed under the *NFP Act* for a Certificate of Continuance of the Corporation;

2) The Articles of Continuance (transition) of the Corporation, which have been submitted to this meeting and are annexed to these minutes as Schedule A, are approved;

3) The general operating by-law of the Corporation (as amended) is repealed effective on the date that the corporation continues under the *NFP Act* and the new general operating by-law No. 1 which has been submitted to this meeting and is annexed to these minutes as Schedule B is approved and will be effective on the same date.

4) Any one of the officers and Directors of the Corporation is authorized to take all such actions and execute and deliver all such documentation, including the annexed Articles of Continuance (transition), the notice of registered office and of Directors in the forms fixed by the Director, which are necessary or desirable for the implementation of this resolution.

The undersigned, being the duly appointed (Secretary) of the Corporation, certifies that the above is a true and correct copy of a special resolution dated 27th day of July, 2014 by a majority of not less than two-thirds of the votes cast by the members of the Corporation who voted in respect of the resolution, and the resolution is in full force and effect, unamended as of the date below.

Dated this 27th day of July, 2014
Alvin Masse, VE3CWP, RAC Corporate Secretary

At the 2014 Annual General Meeting, RAC members who are in attendance will be invited to vote on and give final approval to the special resolution.

I look forward to your attendance.

Geoff Bawden, VE4BAW
President – Radio Amateurs of Canada

— AVIS —

RADIO AMATEURS DU CANADA INC.

Radio Amateurs du Canada est heureux de tenir son Assemblée générale annuelle (AGM) à Vancouver, Colombie-Britannique. L'hôte de l'AGM est le Orca DX and Contest Club qui organisera l'événement en collaboration avec la 59th annual Vancouver 2014 Pacific Northwest DX Convention laquelle se tiendra au même endroit. Tous les membres de RAC sont invités à participer à l'Assemblée générale annuelle.

Date : dimanche le 27 juillet 2014, après la convention DX.

Heure : 12 heures (Pacifique)

Lieu : l'Assemblée générale annuelle se tiendra à l'Inn at the Quay, 900 Quai Drive à New Westminster, Colombie-Britannique (voir ci-dessous pour plus d'informations).

L'ordre du jour inclura :

- le rapport du président;
- la revue des états financiers de 2013;
- la nomination du vérificateur pour 2014;
- amendement à la Constitution de RAC (voir colonne de droite);

Une période de questions et réponses suivra les activités de l'AGM.

Voici votre chance d'entendre vos représentants vous dire ce qu'ils ont accompli au cours de l'année dernière, poser des questions, faire des suggestions sur la gestion de RAC et connaître ses intentions futures.

Plusieurs membres du Conseil d'administration et de l'Exécutif de RAC participeront à l'Assemblée, à laquelle tous les membres de RAC sont bienvenus. De plus, des membres de RAC pourront participer à l'assemblée à distance au moyen d'un Webinar prévu à cet effet.

Pour plus d'informations sur la Pacific Northwest DX Conference, s'il vous plaît voir l'article ci-dessous ou visiter:

http://orcadxcc.org/vancouver2014/home.html

59ième CONVENTION DX DU PACIFIQUE DU NORD-OUEST

L'Orca DX and Contest Club est heureux d'accueillir l'Assemblée générale annuelle de Radio Amateurs du Canada comme partie prenante de **la 59ième Convention DX (Vancouver 2014) du Pacifique du Nord-Ouest**.

La convention aura lieu du 25 au 27 juillet à la magnifique auberge Inn at the Quay à New Westminster, Colombie-Britannique, à seulement 25 minutes du sud-est du centre ville de Vancouver avec le SkyTrain et à 20 minutes au nord de "Peace Arch" à la frontière CB – Washington.

Les points saillants sont :

- une grande présentation par des DXpeditioners reconnus
- un super prix de présence
- un endroit des plus pittoresques pour accueillir le rassemblement annuel des DXers

Le thème de la convention est "**Souvenir magique**". Venez à la convention et réveillez en vous le sentiment relié à la découverte de la radio amateur des premiers temps – et spécialement pour les DXers, l'excitation de réussir des contacts partout au monde et la magie « du comment » cela se produit réellement.

Le programme est en développement et sera mis à niveau régulièrement sur notre site web. Nous sommes à planifier d'extraordinaires moments pour nos participants. Les DXers seront heureux d'une succession captivante de présentations et de séminaires, et de nombreux prix rendant les choses encore plus intéressantes. Pour les compagnes et compagnons (non DXers), New Westminster offre une pléiade d'activités et de lieux agréables à voir. Et le centre ville de Vancouver est tout près.

Pour plus d'informations, s.v.p. aller à :
http://orcadxcc.org/vancouver2014/home.html

AVIS DE CHANGEMENTS À LA CONSTITUTION

La nouvelle *Loi canadienne sur les organisations sans but lucratif* (*Loi BNL*) a établi de nouveaux règlements pour les corporations fédérales à but non lucratif incorporés au Canada. Pour faire la transition à la *Loi BNL*, une organisation sans but lucratif incorporée au fédéral devra remplacer ses lettres patentes, lettres patentes supplémentaires (s'il y lieu) et les règlements du certificat de prorogation (auxquels sont joints les articles de la corporation) et les nouveaux règlements conformes à la loi sur les organisations sans but lucratif (*Loi BNL*).

Le Bureau des directeurs de RAC recommandent ce qui suit.

Maintenir notre corporation sous les dispositions de la *Loi du Canada sur des organisations sans but lucratif* et autoriser les directeurs à demander un certificat de prorogation.

QUOIQUE la corporation ait été incorporée selon la partie 2 de la *Loi des corporations du Canada* par lettres patentes en date du 2 octobre1992; et

QUOIQUE ces lettres patentes aient été amendées par des lettres patentes supplémentaires en date du 27 juillet 2014; et

QUOIQUE qu'il soit considéré qu'il est du meilleur intérêt de la corporation de poursuivre ses activités sous l'égide de la loi des organisations à but non lucratif selon la section 297 de la *Loi BNL*;

À TITRE DE RÉSOLUTION SPÉCIALE, IL EST DEMANDÉ QUE :

1) Les directeurs de la corporation soient autorisés et habilités à faire application sous la section 297 de la *Loi BNL* auprès du directeur nommé sous la *Loi BNL* pour obtenir un certificat de prorogation de la corporation;

2) Les articles de prorogation (transition) de la corporation, qui ont été soumises à l'assemblée et annexées aux minutes selon la cédule A, soient approuvées;

3) Le règlement général de la Corporation (tel qu'amendé) est abrogé à la date à laquelle l'existence de la Corporation se poursuit sous la *Loi BNL*, et le prochain règlement général No. 1, qui a été soumis à cette assemblée et annexé aux présentes minutes selon la cédule B, est approuvé et entrera en vigueur à la même date.

4) Tout responsable ou directeur de la Corporation est autorisé à prendre toutes actions, d'exécuter et délivrer toute documentation, incluant les articles annexés à la prorogation (transition), l'avis du bureau enregistré et des directeurs dans la forme déterminée par le directeur, qui sont nécessaires ou souhaitables à la mise en application de cette résolution.

Le soussigné, dûment nommé secrétaire de la Corporation, certifie que ce qui précède est une copie conforme et correcte de la résolution spéciale du 27 juillet 2014 accepté à une majorité du deux tiers ou plus des votes exprimés par les membres de la Corporation qui ont voté pour la résolution, et la résolution prend plein effet, non amendée, à la date ci-dessous.

Le 27 juillet 2014
Alvin Masse, VE3CWP, secrétaire corporatif de RAC

À l'assemblée annuelle générale de 2014, les membres de RAC en attente seront invités à voter et à approuver la résolution spéciale.

Merci de participer à l'assemblée.

Geoff Bawden, VE4BAW
President – Radio Amateurs of Canada

– Traduction par Claude Lalande, VE2LCF –

ANTENNA TUNERS: A CLOSE LOOK – PART 1 OF 2

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INTRODUCTION

An antenna tuner, transmatch or antenna tuning unit (ATU) is probably one of the most used devices by Radio Amateurs. Tuners come in all sorts of flavours, each with their advantages and disadvantages for particular applications. But they all have one purpose which is to transform some antenna impedance to a suitable value that the transmitter can accept. In modern solid state radios this wanted impedance is usually 50 Ohms.

This series of articles builds up a picture of antenna tuners starting with a basic building block, the L tuner, and shows how most other tuners can be thought of as an extension of the L tuner.

There are exceptions of course including tuners that are basically broadband transformers and transmission line types that can contain lumped element components as well as transmission line stubs.

Note: This article uses TCA hotlinks to provide access to enriched media from the RAC website. For more information, please go to http://www.rac.ca/tca.

Part 1 of the series also includes three experimental case studies as follows:

1) An L tuner designed for matching high resistance loads.

2) An L tuner designed for matching low resistance loads.

3) A set of L tuners designed to match an **S9V43 LDG** vertical antenna using actual antenna measurements as input data to the design.

Cases 1 and 2 above are used to demonstrate the differences between tuner types with respect to power loss and bandwidth so they are not aimed at any particular application, especially high power. These tuners were designed and tested for their performance as shown below in the case studies. Performance simulations were made at 500 Watts continuous power levels while the tested circuits were demonstrated using small signals.

Case 3 is an example of a vertical antenna using measured values of the antenna impedance. This vertical antenna was built by Doug, VE3XK, who shared the measurement data with me for use in this article. Circuit simulations were done at 500 Watts continuous power to demonstrate the stress level (power, voltage and current) associated with the tuner components.

ABOUT ANTENNA TUNERS

There are many types of antenna tuners that can be used for applications ranging from very low frequencies up to high microwave frequencies that cover several technologies (LF, HF and integrated circuits for example) – see any ARRL Antenna Handbook for examples. The basic principles of impedance matching applied to antenna tuners are given in TCA hotlink 1. Informative articles can also be found in TCA hotlinks 2 and 3.

Some of the main items of concern are:

1) Bandwidth, frequency of operation and tuning range.

2) Power level and coil heating. Some units require a cooling fan.

3) Impedance levels where a match cannot be found (Drop-out). Most tuners have a load impedance range where they cannot be tuned to meet the requirements of obtaining an SWR of 1:1.

4) Losses as they change with load impedance and matching type.

5) Stressing components with over voltage or current.

6) Filtering characteristics and harmonic attenuation.

7) Ease of tuning. Some tuner types are inherently easy to tune but not all.

8) Tuning method: manual or automatic.

THE L TUNER AS A STARTING POINT

L tuners consist of only two elements (see Figure 1 on the next page), one inductor and one capacitor in most cases. It is necessary to use two capacitors or two inductors for certain load conditions and some monoband antennas are designed to be matched with a single capacitor which eliminates the losses associated with inductors. This circuit is worth studying because it is the basis for most other tuners – such as the popular T Match that is commonly used in commercial tuners – as well as their use in automatic tuner circuits. The L tuner type has the following main characteristics:

1) The impedance range that can be matched depends on the configuration used as shown in Figure 1.

When an L network is used, a unique solution for the components values can be found. The matching bandwidth and circuit Q is highly dependant on the load impedance. Once the circuit is tuned there are no other possibilities for component values. We see later that this is not true for other matching networks like the T Match where there are unlimited combinations of inductor and capacitor values that can be used to meet the desired results. This makes the conventional T Match sometimes difficult to operate.

2) The circuit shown in Figure 1(a) is a commonly used L matching circuit. Here a capacitor is connected across the antenna and a series inductor is connected between the load and the transmitter.

This is a low pass circuit which can match any resistive load greater than 50 Ohms and any load reactance (inductive or capacitive). The losses increase as the load resistance increases but this is generally not a big factor until the resistance gets very large. See case study #1 for an example of its use.

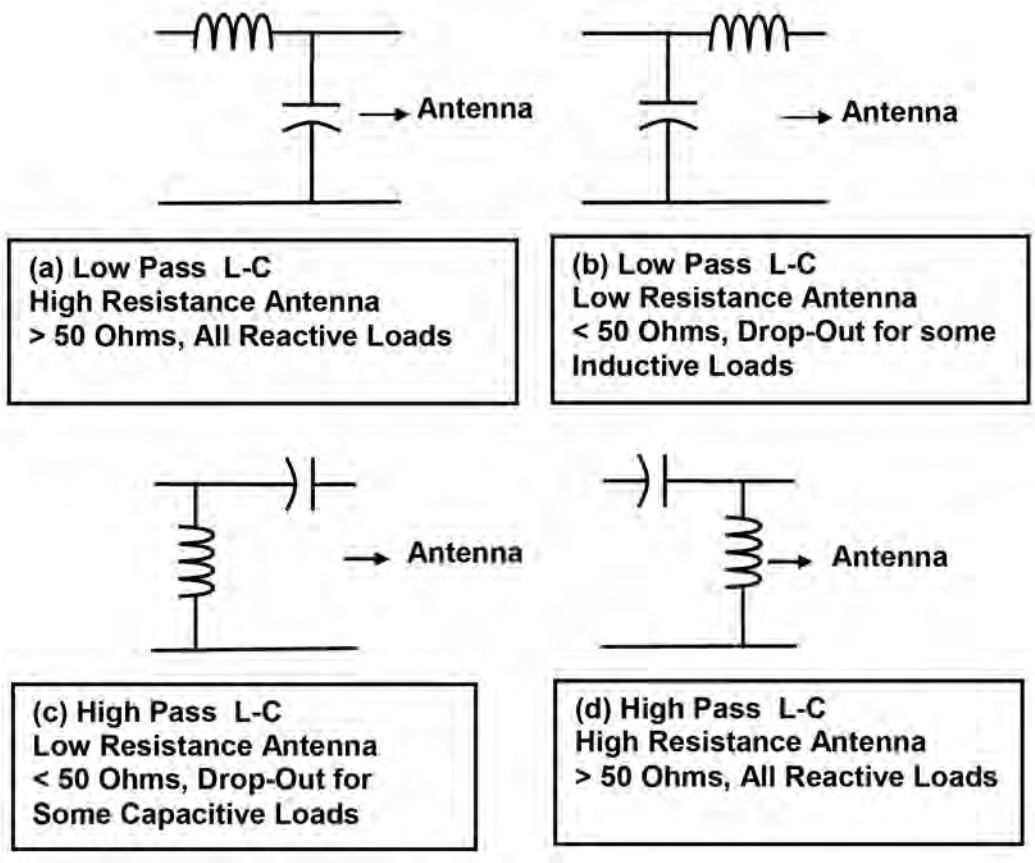
3) The circuit shown in Figure 1(b) is also a low pass type but in this case the load resistance must be any value less than 50 Ohms. In this case there are some inductive loads that cannot be matched. In addition, the loss increases dramatically as the load resistance get small. See case study #2 for an example of its use.

4) The circuit shown in Figure 1(c) is a high pass L matching circuit. It can match any load resistance that is less that 50 Ohms. In this case there are some capacitive loads that cannot be matched. The losses increase as the load resistance decreases.

5) The circuit shown in Figure 1(d) is also a high pass L matching circuit. In this case the tuner can match all resistive loads greater than 50 Ohms and any reactive load. The losses increase as the load resistance increases.

The L circuit in one of its configurations is used extensively in several automatic tuners which achieve the desired results by switching capacitors and inductors into an appropriate L circuit. It is quite common (see TCA hotlink 4) to have over 200 capacitors and inductors built into the tuner that provide good tuning resolution for difficult to match antenna systems.

Figure 1: Typical L Match Tuner Circuits (not all)



The L Match shows us that at least two independent variables are required to match a general impedance to your transmitter. This idea carries over to all other tuners. You will find out that some T type tuners use three variables (three tuning knobs) while others use a differential capacitor and one inductor (only two tuning knobs).

Before moving on to other tuner types in Part 2, I present two case studies of very low power tuners that I have designed, built and tested for this article (see Figure 2 on the next page). These experiments use commonly available components that can be interchanged with other items that you might have in your junkbox or find at fleamarkets. To accomplish this task the L-C values were first found using a calculator by WY2U (see TCA hotlink 5).

Then the circuits were built and tested using an AIM 4170 impedance analyzer. After the construction phase, I then simulated the results using SimSmith (see TCA hotlink 6) to find the expected input impedance, power, current and voltage in all components.

Case Study One: L Tuner High Resistance Load

This case study is and example of a low pass network connected to a series R-C load where the resistance is greater that 50 Ohms. The schematic for the circuit is shown in Figure 1(a). This tuner was constructed and measured with my AIM 4170 impedance meter (see Figure 2, top photo).

The circuit values for the tuner are:

L = 3.26 uH, C= 105 pF, R_{load} = 300 Ohm and C_{load} = 100 pF

As seen in Figure 2, the capacitor is variable with a total capacitance of approximately 200 pF. The inductor is an air duct coil that was tuned to the correct inductance for operation at 7 MHz. The dimensions of the coil are: length = 20 mm; diameter = 45 mm; and number of turns = 8. You can substitute any air wound coil for your model as long as it is adjusted to the correct inductance.

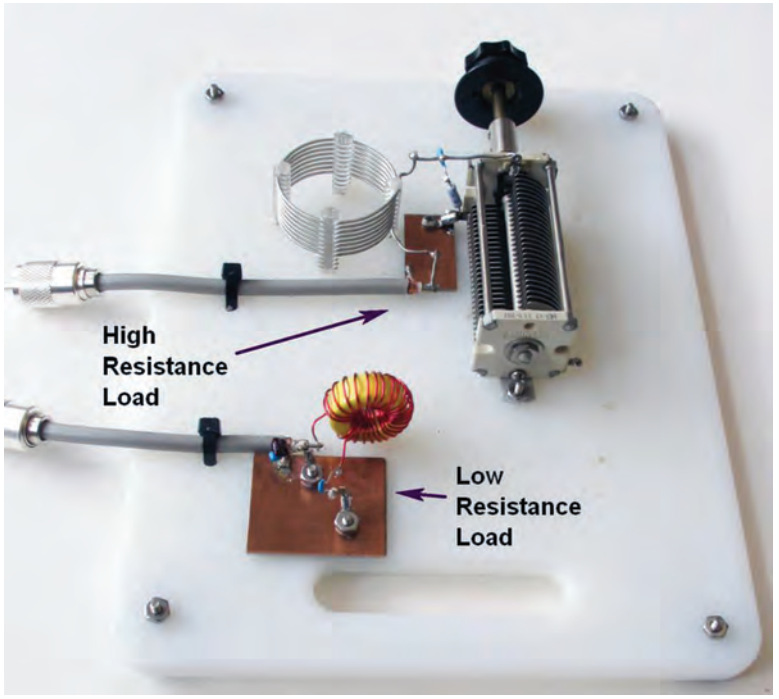
The measured results for the tuner are shown in Figure 3 on the next page, which displays the SWR and Return Loss as a function of frequency from 6 to 8 MHz. The 1.5:1 SWR bandwidth is slightly greater than 1 MHz, which means that most solid state transmitters can easily work with this particular set up with no tuning: adjust the tuner at the band centre and leave it alone as the frequency is changed.

TABLE 1: LOW PASS TUNER HIGH RESISTANCE LOAD; CASE STUDY #1

TRANSMITTER POWER 500 WATTS CONTINUOUS, 7 MHz Inductor Q = 150 Capacitor Q = 2000				
	R_L	C	L	Notes
Power [W]	489	0.5	9.55	Power in L nearly 10 Watts.
Voltage RMS [Volt]	383	481	453	Power in load 489 Watts.
Current [A]	1.3	2.2	3.2	

Figure 2: L Match Tuner Examples 7 MHz

Top photo: High Resistance Load – Case Study #1
Bottom photo: Low Resistance Load – Case Study #2
Both use R-C Loads



To complete the study of this circuit, I also calculated the power lost in each element of the tuner as well as the voltage and current for each element at a power level of 500 Watts. I used QRO levels here to see if a cooling fan would be required. The results are given in Table 1. Notice that 489 Watts is delivered to the load and only 9.55 Watts to the inductor. This is a very efficient system.

Case Study Two: L Tuner Low Resistance Load

This case study is an example of a low pass network connected to a series R-C load where the resistance is less that 50 Ohms. The schematic for the circuit is shown in Figure 1(b). This tuner was constructed and measured with my AIM 4170 impedance meter (see Figure 2, bottom photo).

The circuit values for the tuner are:

L = 9.5 uH, C= 1.06 nF, R_{load} = 5 Ohm and C_{load} = 57 pF

As seen in Figure 2, the capacitor and inductor are fixed with the inductor made from a powdered iron T106- 6 Toroid core with 28 turns of enamelled wire, AWG #24 (0.5 mm diameter).

The measured results for the tuner are shown in Figure 4 on the next page, which displays the SWR and Return Loss as a function of frequency from 6 to 8 MHz. The 1.5:1 SWR bandwidth is only 46 kHz. because of the very low resistance of the load. Notice that the bandwidth is much smaller than the results for case study #1 as expected. To complete the study of this circuit, I also calculated the power lost in each element of the tuner as well as the voltages and current across and through each one for a transmitter power level of 500 Watts.

I used QRO levels here to see if a cooling fan would be required as before. These results are given in Table 2. The main thing to notice is that the matching coil is dissipating 197 Watts, which means that in a real 500 Watt application a cooled air core would have to be used and probably this would not be a useable circuit for such high power levels. The voltage across the coil is 3350 Volts while the load resistor voltage is only 40 Volts. This is the one reason why commercially available tuners usually specify a minimum load resistance of 15 to 20 Ohms.

Case Study Three: LDG S9V43 Vertical Antenna

An LDG S9V43 vertical antenna built by Doug, VE3XK, was used for this case study because it presents significant matching problems and demonstrates how different L type tuners must be used to achieve multiband operation. This matching is usually accomplished with an outdoor automatic tuner located at the base of the antenna. Doug and I measured the impedance at the base of his antenna with my AIM 4170 impedance meter. These measurements (see Figure 5 on page 15) formed the basis for the design of several L matching structures, one for each band, to investigate the power lost in each of the tuning elements. As seen in Figure 5 this antenna has a very wide range of both resistance and reactance that are presented to the tuner. In several bands, the resistance is extremely high. Note the scale on the vertical axis of the graph.

Figure 3: Measured SWR of High Resistance L Match

Measured Results: Case Study #1
Low Pass High Resistance Tuner
Note the Wide Bandwidth

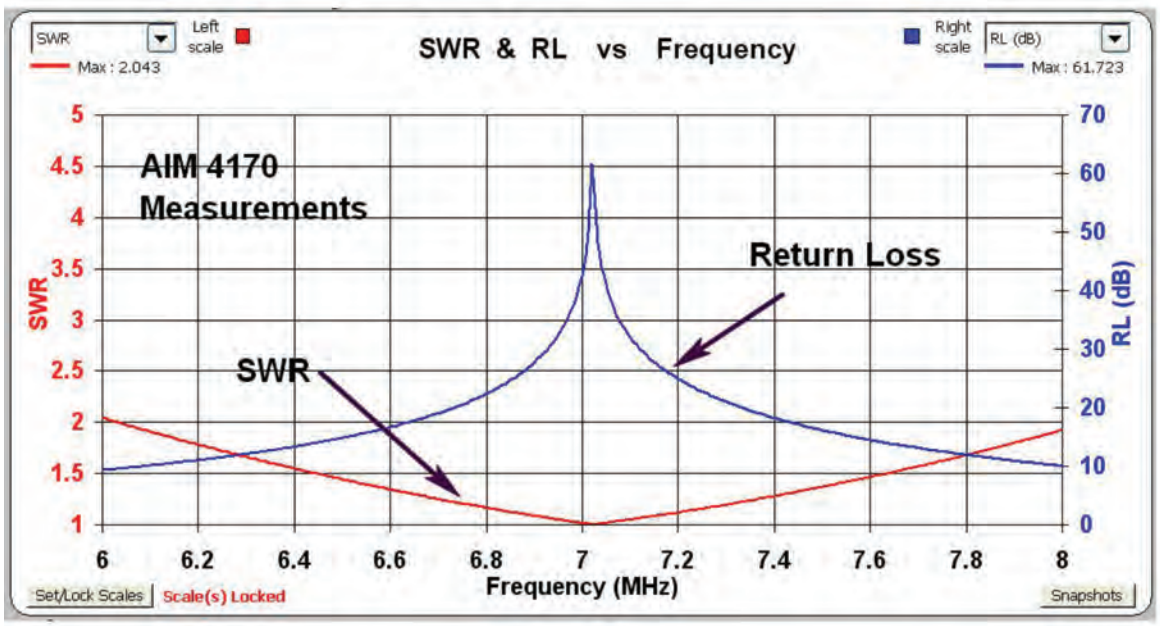


TABLE 2: LOW PASS TUNER LOW RESISTANCE LOAD; CASE STUDY #2

TRANSMITTER POWER 500 WATTS CONTINUOUS, 7 MHz				
	RL	**C**	**L**	**Notes**
Power [W]	321	0.6	197	Power in L=197 Watts.
Voltage RMS [Volt]	40	158	3350	***Cooling needed.***
Current [A]	8	1.7	8	Power in Load = 321 Watts.

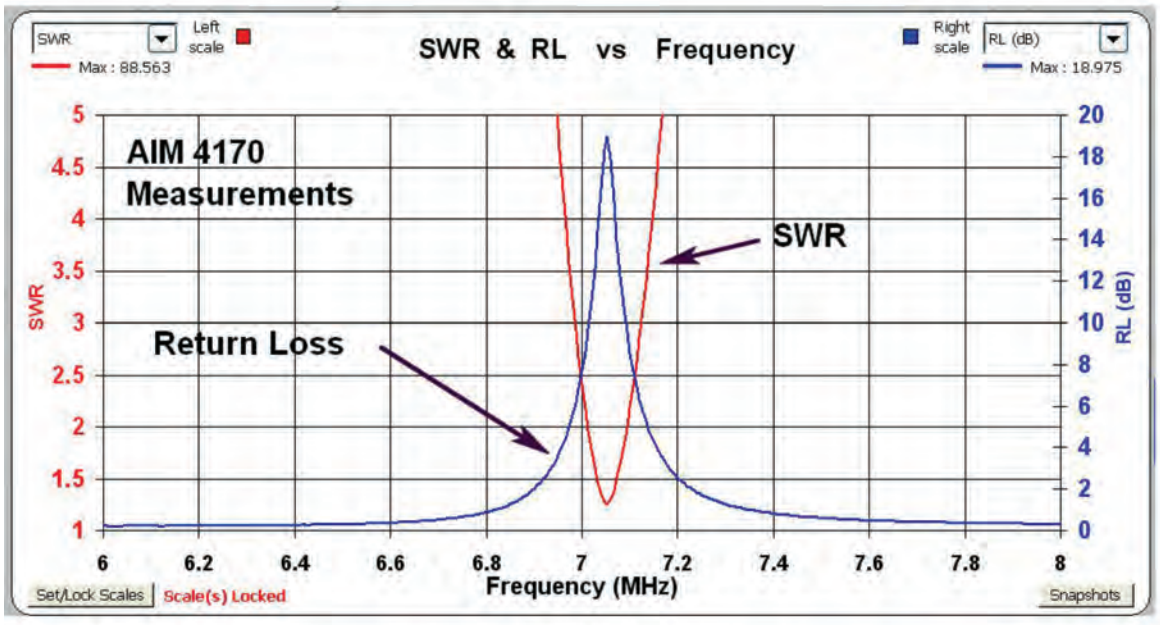
TABLE 3: VE3XK VERTICAL ANTENNA (LDG S9V43)

TRANSMITTER POWER 500 WATTS CONTINUOUS, VE3XK VERTICAL				
Frequency [MHz]	**Tuner Type (see Figure 1)**	**Load Power [W]**	**Power Lost in L [W]**	**Voltage across L [V]**
1.9	Low Pass (b)	405	96	3260
3.7	High Pass (d)	425	73	1330
5.3	Low Pass (b)	495	5	191
7.1	Low Pass (a)	488	12	552
10.1	High Pass (d)	476	22	940
14.2	Low Pass (b)	484	16	908
18.1	High Pass (d)	495	4	410
21.2	High Pass (d)	480	19	709
24.9	High Pass (d)	472	27	672
28.5	Low Pass (a)	496	3	150

These circuits were simulated with the aid of SimSmith. They were not built since a commercial tuner was actually used for everyday operation. Table 3 shows the results of this analysis.

Figure 4: Measured SWR of Low Resistance L Match

Measured Results: Case Study #2
Low Pass Low Resistance Tuner
Note the Narrow Bandwidth



The main thing to notice is that power level delivered to the load is reasonable for all bands, but the power loss and voltage across the inductor in the tuner are extremely high in the 160 and 80 metre bands. If the antenna is going to be used at 160 metres a special tuner must be fabricated that uses a cooling fan and contains components that can withstand the extreme voltages. In addition, since the antenna is near resonance in the 60 metre band, very little power is lost in the inductor. The best bands to use for this antenna are 60, 17 and 10 metres where the power delivered to the load approaches 500 Watts.

This analysis does not address antenna efficiency or account for the legal power requirements of 50 Watt Effective Radiated Power (ERP) maximum in the 60 metre band.

CONCLUSIONS AND DISCUSSION

Part 1 of this series gave some background on antenna tuners and showed the results of three case studies.

The studies clearly show that lossy inductors are the main culprit in the loss of efficiency and design issues with the L tuner.

In monoband antennas the antenna can be set up so that a single capacitor can be used for the tuner.

An example of this is to make a vertical antenna that is longer than a quarter wavelength so it is detuned and looks inductive.

I use this idea with one of my 20 metre portable antennas.

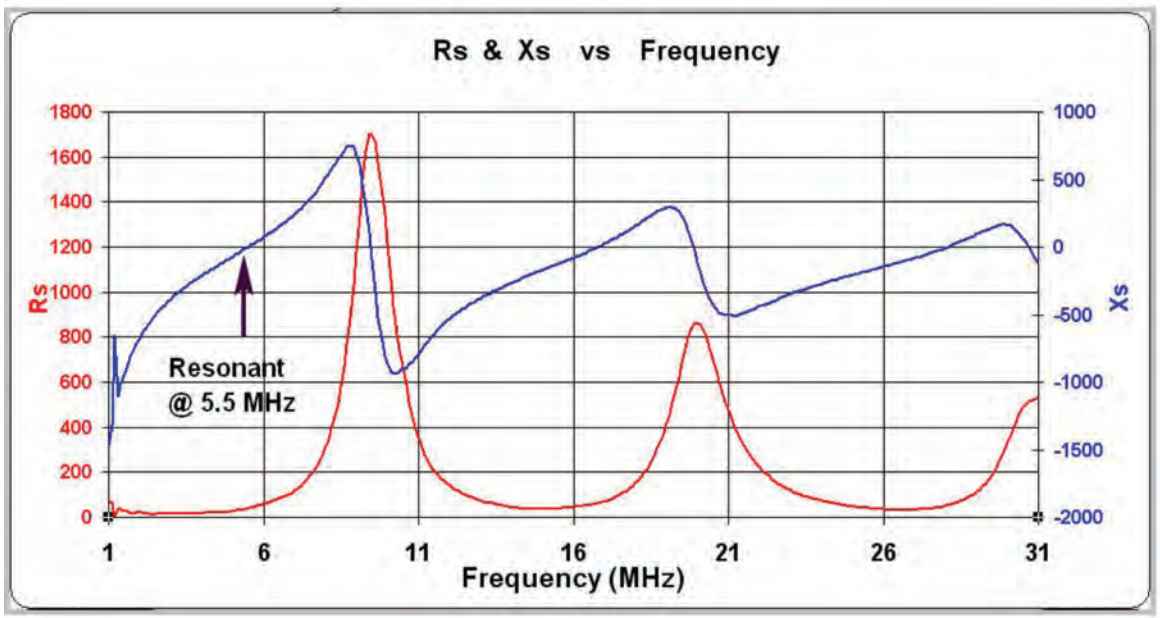
The SimSmith files for these studies are posted on my website (http://ve3kl.com/) for your use if you want to see all of the circuit details and simulated results. For all simulations, the coil Q was set to 150.

Part 2 goes on to other commonly used antenna tuners: the T, Pl, Z and transmission line types. Also included is a discussion on the uses of these tuners for specific applications and how to avoid coming to incorrect conclusions about your tuner performance. In some extreme cases your tuner can actually match (SWR =1) into a short circuit where all of the power is dissipated in the tuner and no power is radiated. You might not even notice this while using QRP rigs. No smoke, great SWR but the band appears to be dead.

FURTHER STUDY USING TCA HOTLINKS

Further information is provided with TCA hotlinks which are easily accessed via the RAC website. For this information, please visit http:// www.rac.ca/tca. Hotlinks make it unnecessary to type URL addresses into your computer and provide you with calculators and other support that demonstrates the ideas presented in the articles.

Figure 5: Measured Base Impedance of the VE3XK Vertical Antenna



The following hotlinks for this article are available on the RAC website.

TCA hotlink 1: Impedance Matching. Part 1: Basic Principles. David Knight G3YNH and Nigel Williams G3GFC – http://www.g3ynh.info/zdocs/z_matcing/part_1.html

TCA hotlink 2: The EZ Tuner Parts 1-3, James Garland, W8ZR, Online archive for ARRL members, published in the April/May/June 2002 *QST* – http://www.arrl.org/

TCA hotlink 3: The Z Match Tuner, Lloyd Butler, VK5BR – http://users.tpg.com.au/ldbutler/SingleCoilZMatch.htm

TCA hotlink 4: MFJ-926B Remote Antenna Tuner – http://www.mfjenterprises.com/support.php?productid=MFJ-926B

TCA hotlink 5: WY2U Impedance Match Calculator – http://www.hoflink.com/~mkozma/match19c.html

TCA hotlink 6: SimSmith – http://www.ae6ty.com/Smith_Charts.html

ACKNOWLEDGEMENTS

The author wishes to thank Doug, VE3XK, for supplying the valuable impedance data from his vertical antenna. This allowed a realistic study of a commonly used antenna and the tuners used for it.

– Until later, David, VE3KL

TCA

INDUSTRY CANADA AUTHORIZES 630M BAND ALLOCATION FOR THE CANADIAN AMATEUR SERVICE

Prepared by Norm Rashleigh, VE3LC

On May 1, 2014, Industry Canada released the revised Canadian Table of Frequency Allocations and included the band 472 to 479 kHz as a secondary status allocation to the Amateur Service, this in spite of the objections from the power utility sector that was the subject of our article in the January-February 2014 issue of TCA.

The international and now domestic authorization of this Medium Frequency (MF) Amateur band concludes many years of effort on the part of Radio Amateurs of Canada's international representatives involved with all the preparatory work leading up to and including the World Radiocommunication Conference in 2012.

Canada is now in the exclusive company of a short list of countries that enjoy domestic operation by its Amateur Service on the 472 to 479 kHz band; others include: Australia, New Zealand, Germany, France and Norway to name a few. Some US Amateurs are active on the band under special authorizations using "WG2" call signs. In addition, UK Amateurs are also active upon being issued a "Notice of Variation".

Primary status for this band remains "Maritime Mobile" for radiotelegraphy, however it seems such use by the maritime mobile service will be very limited in the modern era. In other regions, this spectrum space may also be assigned to stations in the aeronautical radionavigation service.

In using this newly allocated spectrum, Amateurs must abide by Footnote 5.80A in both the International and Canadian Tables. For Canada, that limits the power to 5 Watts EIRP (equivalent isotropically radiated power). And Amateurs, as secondary status users, shall ensure they cause no harmful interference to, nor claim protection from, stations that have primary status in this unique spectrum space. Of course, to achieve 5 watts EIRP, considerable transmitter power will be necessary to counter the very low radiation efficiency of practical antennas for this band. To ensure that the Amateur power limit is not exceeded, Amateurs on this new MF allocation should be able to demonstrate their EIRP with appropriate antenna NEC modeling software. And indeed, attention to good transmitter harmonic suppression will be necessary to ensure use of this band does not result in complaints of AM broadcast band interference or otherwise up the spectrum.

At the present time, we know of no Amateur specific commercial equipment available for transmitting on this band. Therefore, for the time being, it will be the domain of those with Advanced Amateur certification.

As yet, the band is not in the Frequency Table of RBR-4 (Standard for the Operation of Radio Stations in the Amateur Service). And therefore, a determination by Industry Canada has not been released about the maximum emission bandwidth permissible on the band. However, since the band is only 7 kHz wide, it is advisable that only very narrowband modes be used such as CW, PSK31, JT65/JT 9 and WSPR.

Note that RBR-4 specifies that the emission bandwidth in the LF band, 135.7 to 137.8 kHz, not exceed 100 Hz. We expect a somewhat greater emission bandwidth would be available for operations on 630 metres – a subject that may require further consultation between RAC and Industry Canada.

Bandplanning for these allocations has now been referred to RAC's 0-30 MHz Bandplanning Committee.

REFERENCES

Canadian Table of Frequency Allocations, (2014 Edition):
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10759.html

Received comments by Industry Canada to the Proposed Revisions to the Canadian Table of Frequency Allocations.
http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10704.html

BUILDING THE ONTARIO EAST SECTION: HELP WANTED FROM THE RAC AFFILIATED CLUBS

Three Assistant Section Manager (ASM) positions need to be filled by Affiliated Club volunteers who have leadership experience (such as Past Presidents), be self-motivated and act as the liaison between all clubs within the Ontario East Section and the Section Manager in one of three capacities.

Positions to be filled are: Affiliated Club Liaison Coordinator, Public Information Officer (Public Relations) and Technical Coordinator.

These three Assistant Section Managers will then seek to work with each Affiliated Club within this Section.

Each Affiliated Club will then need to identify three volunteers from within their club to act as liaison with the three above mentioned ASMs.

These individuals will work under the title of: Affiliated Club Liaison, Club Public Information Officer and Club Technical Liaison.

This will bring into place a much-needed communications channel from Affiliated Clubs to the RAC Section and vice versa to enable work on any issues that may arise.

For more information please search for "VPFSC BN 4" on the RAC website and read page 4 of the following document: "VPFSC BN 4 February 14, 2011 Briefing Note – Development of new RAC Field Services Organization".

DO YOU HAVE QUESTIONS ABOUT EXAMINATIONS, CALL SIGNS?

Industry Canada Amateur Radio Service Centre
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Sault Ste. Marie, ON
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spectrum.amateur@ic.gc.ca
1-888-780-3333 (Toll free)
Fax 1-705-941-4607

INDUSTRIE CANADA AUTORISE L'ATTRIBUTION DE LA BANDE DE 630 METRES POUR LE SERVICE DE RADIOAMATEUR CANADIEN

Rédigé par Norm Rashleigh, VE3LC

Le 1er mai 2014, Industrie Canada publiait son nouveau *Tableau canadien d'attribution des bandes de fréquences* qui comprend l'attribution de la bande de 472 à 479 kHz au Service de radioamateur sur une base secondaire, en dépit des protestations des entreprises de service public de l'électricité tel que couvert par notre article dans le TCA de janvier-février 2014.

L'attribution, d'abord internationale puis nationale, de cette bande des fréquences moyennes (MF) a été obtenue après plusieurs années de travail des représentants de RAC impliqués dans toutes les étapes depuis le travail préparatoire jusqu'à leur participation à la Conférence mondiale des radiocommunications en 2012.

Le Canada se retrouve donc sur la très sélecte et courte liste des pays qui autorisent le Service d'amateur sur cette bande de 472 à 479 kHz, en compagnie de l'Australie, la Nouvelle-Zélande, l'Allemagne, la France et la Norvège pour en nommer quelques-uns. Quelques opérateurs des É. U. qui détiennent une autorisation particulière pour l'indicatif « WG2 » peuvent utiliser cette bande, tout comme les radioamateurs du Royaume Uni qui ont obtenu une « Notice of Variation ».

Le service primaire de cette bande demeure la radiotélégraphie en « mobile maritime ». Cependant, il semble qu'un tel usage soit devenu assez rare de nos jours. Dans d'autres régions, cette bande peut aussi être attribuée au service de radionavigation aéronautique.

Les radioamateurs qui veulent faire usage de cette nouvelle bande doivent respecter le Renvoi 5.80A des tables d'allocation nationales et internationales. Au Canada, la puissance maximale autorisée est de 5 W PIRE (puissance isotrope rayonnée équivalente). Aussi, en tant qu'usagers secondaires, les radioamateurs ne doivent pas causer de brouillage préjudiciable ni demander à être protégés du brouillage des stations du service primaire dans cet espace particulier du spectre.

Évidemment, pour arriver à rayonner 5 W PIRE, un transmetteur de puissance considérable sera requis pour contrer la très faible efficacité des antennes qu'il est possible de construire pour cette bande. Afin de s'assurer que la puissance maximale ne sera pas excédée, les radioamateurs devraient pouvoir prouver leur PIRE en utilisant un logiciel approprié de modélisation d'antennes NEC. Et bien sûr, une attention particulière devra être portée à la suppression des harmoniques du transmetteur afin d'éviter tout brouillage dans la bande de radiodiffusion AM et dans le spectre au-delà.

En ce moment, comme nous ne connaissons pas d'équipement dans cette bande pour le marché particulier des radioamateurs, il appert que ceux qui voudront s'y lancer devront détenir un certificat supérieur.

Comme la bande n'est pas encore définie dans le document IPR-4 – *Normes sur l'exploitation des stations radio autorisées dans le service de radioamateur*, Industrie Canada n'a pas encore de norme concernant la largeur des signaux transmis dans le spectre autorisé. Étant donné que ce dernier n'est que de 7 kHz, nous recommandons de vous en tenir à des modes de transmission de largeur étroite comme le code morse (CW), PSK31, JT65/JT 9 et WSPR.

Notez que l'IPR-4 spécifie une largeur maximale de signal de 100 Hz pour la bande des grandes ondes (LF) entre 135.7 et 137.8 kHz. Par conséquent, nous pouvons espérer un peu plus de latitude sur la largeur des signaux transmis sur 630 mètres – un sujet qui pourrait nécessiter des discussions supplémentaires entre RAC et Industrie Canada.

La gestion de l'utilisation des fréquences de cette bande a été confiée au comité de gestion des bandes 0-30 MHz de RAC.

RÉFÉRENCES

Tableau canadien d'attribution des bandes de fréquences (édition 2014) :

http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10759.html#s3

Commentaires reçus par Industrie Canada concernant les révisions proposées au Tableau canadien d'attribution des bandes de fréquences :

http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10704.html

TCA

DARF IS THE DEFENCE OF AMATEUR RADIO FUND

It is a Trust Fund established in the early 90s by the Canadian Radio Relay League to provide financial support for research, and to defray travel expenses of a delegate to World Radio Conferences to defend the Amateur Radio bands.

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The trust is entirely separate from, and cannot be used for, RAC financial transactions. Donations may be made by cheque only. Cheques should be made out to "The Defence of Amateur Radio Fund" and may be sent by mail to:

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THE BROADBAND HIGHSPEED AMATEUR [RADIO] MULTIMEDIA NETWORK (BBHN HAMNET)—PART 2

Note: *Part 1 of this column appeared in the May-June 2014 issue of TCA.*

The BBHN isn't just limited to exchanging data with other Mesh nodes, it can also connect to the WL2K (Winlink 2000) global radio email messaging system. Chris von Gorp, PA7RHM, has written an excellent tutorial (a copy is on my website) on how to integrate the two using Paclink combined with the free Apache SQL Server and WebMail Lite programs. I'll only discuss the overall concept (see Figure 1) because the WL2K system is covered in Part 1 (May-June 2013 TCA column), and I won't go into the specifics of Chris' detailed, step-by-step instructions.

Note: *The WL2K RMS Packet and Paclink programs support the AGW PE (packet engine) – as now does RMS Express thanks to Jim Muli, W2YG, and his AGW Express Interface – allowing more Amateurs to participate because only a soundcard-to-radio interface is needed and many Amateurs have one. RMS Express also supports the soundcard WINMOR HF protocol so you can use a combination of VHF/HF WL2K with the BBHN.*

"MOVING THE MAIL"

One important function of EmComm (emergency communications) is messaging or "moving the mail". Local disaster area voice/digital communications are normally conducted using short-range (VHF/UHF) frequencies and are generally curt and concise because first and second responders don't need (or want) to send/receive lengthy lists of information/instructions, and the KISS (keep it short and simple) principle is applied.

But back at the Emergency Operations Centre (EOC), others do want and need details, lists, and facts and figures: the media, municipal/provincial/federal authorities, various support NGOs (non-governmental organizations) and so on.

This type of messaging is normally conducted face-to-face via video conferencing, texting, etc., often using smartphones requiring cellular networks which will fail when least expected.

Emergency Management Ontario (EMO) says we must *all* be self-sufficient for at least three days (or more) when cut off from the outside world, so how do small and isolated communities or groups re-establish critical wireless communications without the resources of a Toronto or Montreal? Mesh networks to the rescue!

MESH WEBMAIL SERVER & WINLINK 2000 SYSTEM

This system (see Figure 2 on the next page) allows everyone to communicate directly without having to scribble down messages, pass them over to and tie up radio operators, then wait for a reply back in the reverse sequence. Most iDevices can connect to alternate networks (2.4 GHz, in this case) and this allows us to keep wireless messages flowing, eliminating the "middle-person", saving time, reducing errors and freeing up limited resources (people) for other purposes.

Note: *We could use the term "Mesh Mail" to differentiate this service from other electronic messaging systems.*

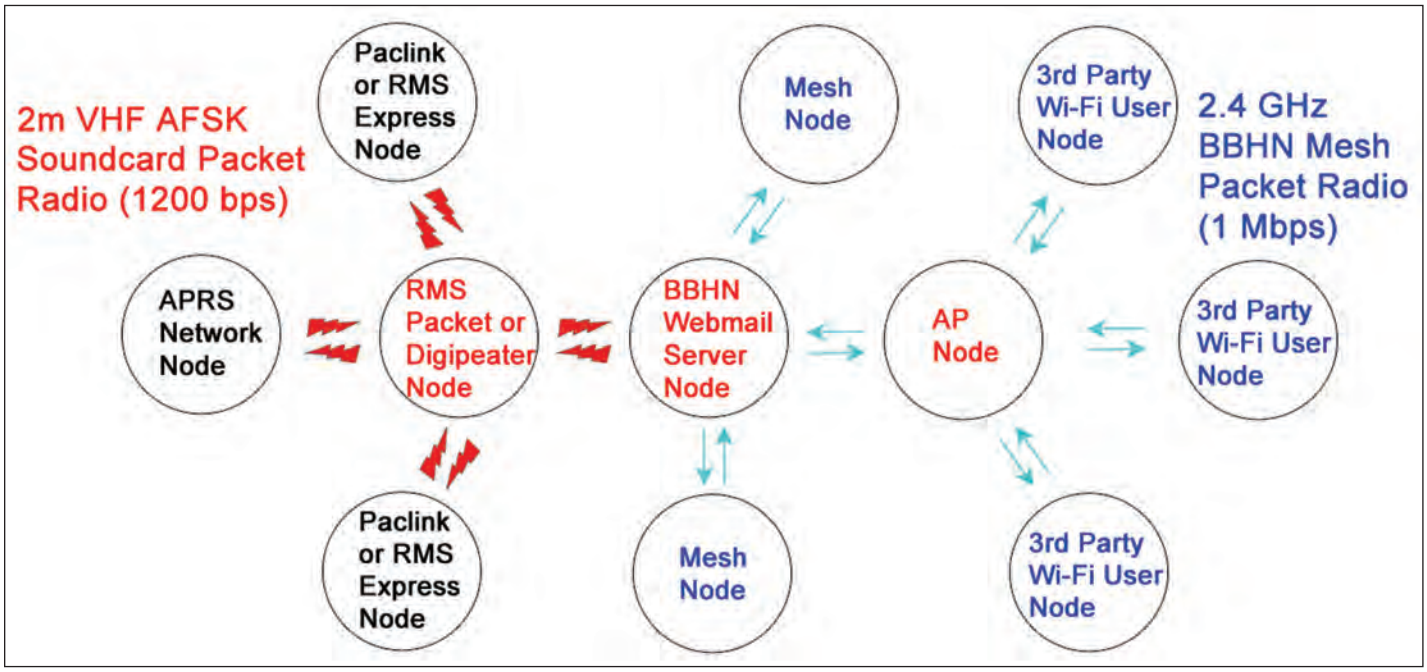


Figure 1: BBHN Webmail Server Network Overview (no commercial communication systems available)

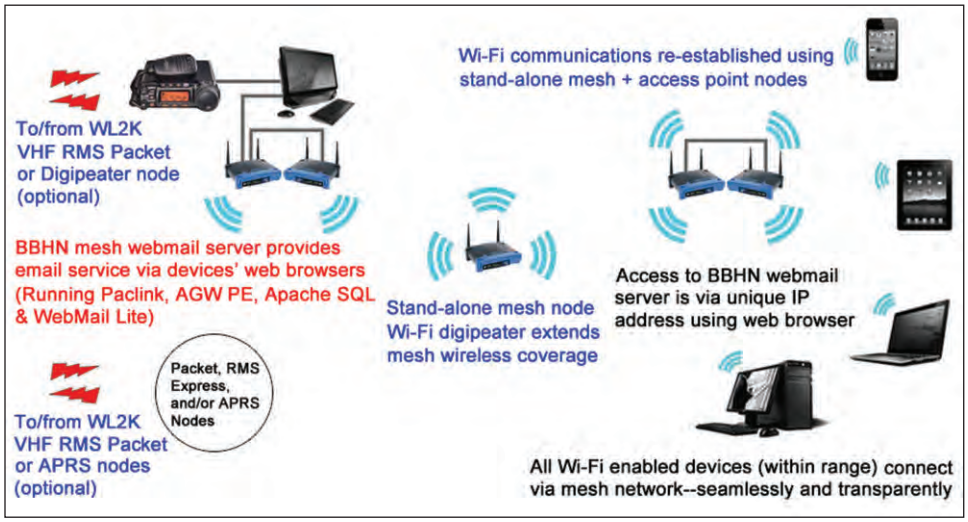


Figure 2: BBHN Webmail Server Network (no commercial communication systems available)

QUICK OPERATING POINTS

1) The webmail server is a Windows-based computer (XP and up) connected to Mesh and AP (access point) nodes (for third party access), running the Paclink, Apache SQL Server and WebMail Lite software installed as per Chris' instructions. For WL2K connectivity (optional) we also need a soundcard radio interface connected to a VHF (or HF) transceiver.

2) Paclink creates/controls all (tactical) user email accounts, acts as a liaison between Apache/WebMail, and optionally provides WL2K access (VHF and/or HF) to RMS Packet stations to extend the range of the Mesh network.

3) Messaging is via web browsers providing a Hotmail type interface, accessible to Windows, Linux, Apple or Google-based wireless iDevices through the AP's (and Mesh node connected computers, of course). You only need the webmail server's IP (Internet protocol) address, your tactical email name/password, and a list of other addresses: for example EOC, REDCROSS-12, SHELTER-4, POLICECEN, FIRECEN, HOSPITAL, etc. The domain name is "@winlink.org": e.g. REDCROSS-12@winlink.org.

4) VHF/HF WL2K (and packet radio/APRS) stations inside or outside the Mesh can send/receive messages through interchange RMS Packet or APRS station(s) and the webmail server (and vice versa). Depending on the situation you may want to run the two systems separately, and ideally you already have VHF/HF, RMS Packet and APRS stations in your area.

Note: *Short text/cellphone messages can be "piggybacked" onto APRS using the APRSLink WL2K service, and RMS Packet stations can share the national APRS frequency (144.390 MHz, in North America) so everyone can be on a common VHF simplex data frequency. APRS is a Mesh network and invaluable for EmComm especially when combined with the WL2K system.*

REAL WORLD USE

Someone in your BBHN group (probably you) has to setup the working webmail server before you can add the WL2K component (if desired). The only drawback with the combined systems is the downshifting in transmission speed required with the WL2K system and its maximum message size (120,000 characters), but if you keep messages short and any attachments small, the WL2K system can keep up, and there are better alternatives to move large chunks of data through a Mesh network (TeamViewer, for one).

Note: *Figure 3 is a combined image of two ARES Webmail logon screens the end user sees. Figure 4 depicts a status message from a Red Cross station to an EOC, and Figure 5 on the next page is the EOC acknowledging using a quick reply. All screen captures are from various iDevices connected through a portable BBHN Mesh webmail server via its AP (see Figure 6).*

MY FINAL

In Part 3, we'll look at streaming Skype-like Mesh images and video/audio because those in charge often need to see and hear things in real-time to better make decisions during emergencies.

After my first BBHN article, Kevin, VA3KGS, emailed me about his local Mesh group's work with the 440 MHz BBHN Mesh variation for extended range through difficult terrain with crossover connectivity to the 2.4 GHz system. Way too cool! –73

Figure 3: ARES Webmail Server Logon (combined images)

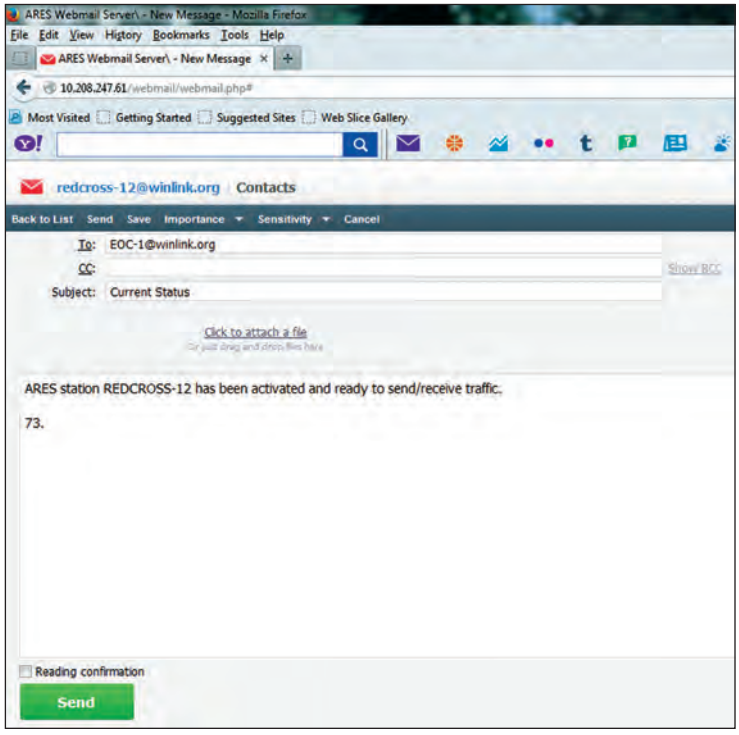


Figure 4: Sending Webmail

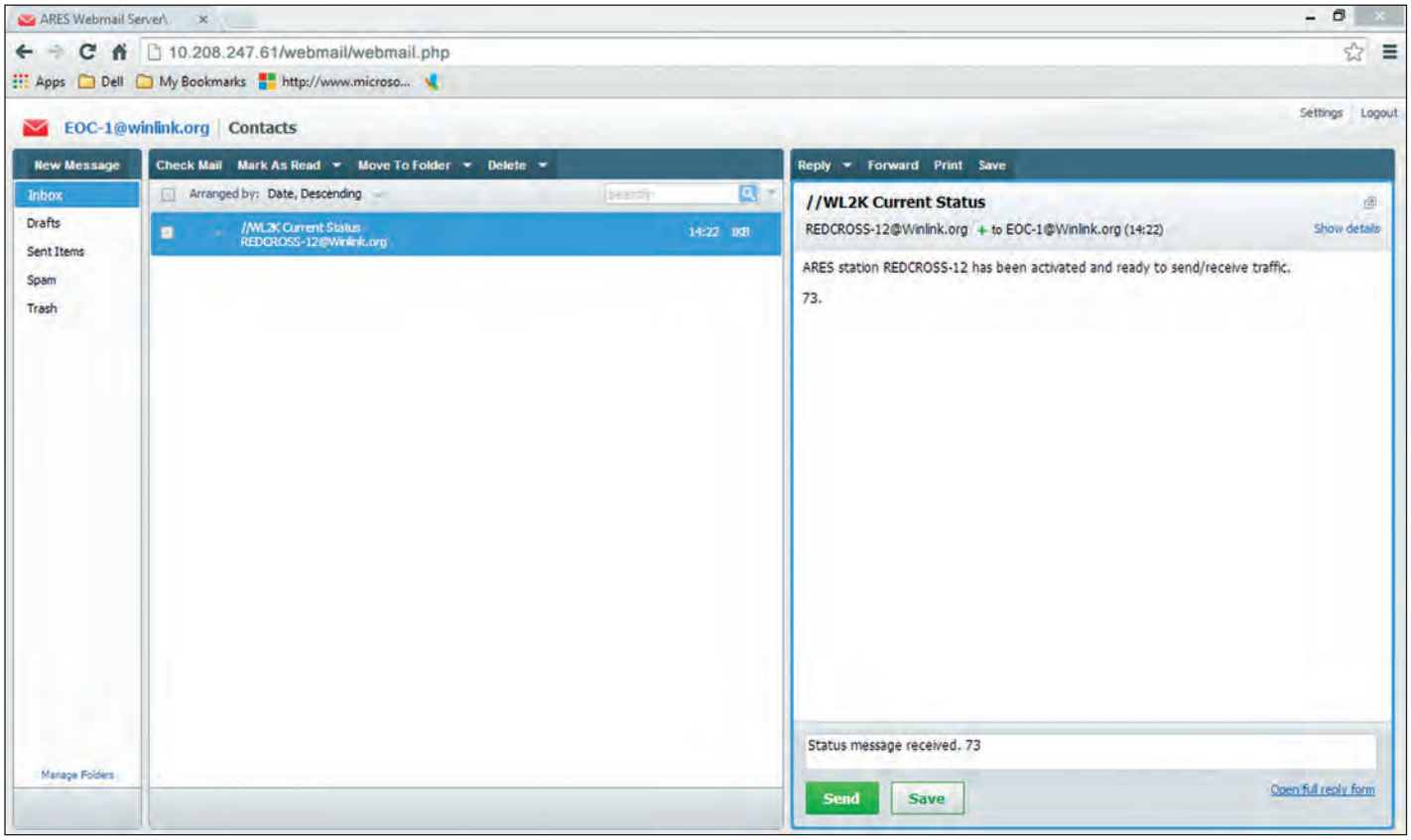


Figure 5: Receiving Webmail (with a quick message reply back)

Figure 6 (at right): VA3ROM Portable BBHN Mesh & AP Nodes (Supports separate video, webmail, APRS, and website servers via a connected laptop)

REFERENCES AND RESOURCES

AGW Express Interface
http://w2ygsoftware.com

APRSLink
http://tiny.cc/buthfx

Emergency Management Ontario
http://tiny.cc/v7vafx

VA3KGS: Amateur Radio
http://tiny.cc/icthfx

WL2K Global Radio Email System
http://www.winlink.org

Webmail Access to Paclink (PDF)
See the "All Things Digital website" at:
http://tiny.cc/gs7ffx

YouTube Videos

Emergency Communications 101 (1-4):
http://tiny.cc/jj5ffx

Post Disaster Communications:
http://tiny.cc/jy4ffx

Tactical Call Signs:
http://tiny.cc/rg4ffx

VA3ROM: All Things Digital
http://tiny.cc/gs7ffx

For the RAC Store visit:
http://www.cafepress.ca/rac_radio

NOTICE TO RAC MEMBERS RESIDING IN ATLANTIC, BRITISH COLUMBIA/YUKON, MIDWEST AND ONTARIO NORTH/EAST REGIONS

Call for Nominations of Candidates for Regional Director to serve on the Board of Directors of Radio Amateurs of Canada Inc.

The Secretary of Radio Amateurs of Canada Inc. hereby solicits nominations for the positions of Director for the Regions of Atlantic, British Columbia/Yukon, Midwest and Ontario North/East (postal codes K and P). Elections for these positions will be held in October 2014 to take office on January 1, 2014 for a two-year term.

Incumbents:

Atlantic: Everett Price, VO1DK

British Columbia / Yukon: William (Bill) Gipps, VE7ISV/VE7XS

Midwest: Derek Hay, VE4HAY

Ontario North/East: Bill Unger, VE3XT (completed tenure)

1. The Candidate:
   - ✓ must be a Full Voting Member of RAC
   - ✓ must have reached the legal age of majority
   - ✓ must reside in the Region for which he or she is nominated
2. A candidate may not nominate himself/herself.
3. The nomination form will:
   - ✓ be printed or typed
   - ✓ clearly indicate the candidate's name, call sign and RAC membership number
   - ✓ clearly indicate the names, call signs, RAC membership numbers and original signatures of ten (10) or more full voting members of RAC
4. The nominators must have reached the legal age of majority and must reside in the same Region as the candidate whom they are nominating.
5. Each candidate must:
   - ✓ sign the nomination form, indicating a willingness to be nominated
   - ✓ include with the nomination a brief biographical sketch/CV limited to 500 words succinctly setting out his/her background and qualifications. A candidate choosing to submit a biographical sketch in both English and French languages will be allowed 500 words in each language. The biographical sketch will not include any campaign platform material.
6. All **original nominations and supporting documentation, including the biographical sketch,** must be **received** by the Secretary of RAC at the address indicated on page 22 by 3 pm on Tuesday, September 2, 2014.

It is suggested (but not required) that the nomination forms be sent by registered mail.

AVIS AUX MEMBRES DE RAC RÉSIDANTS DANS LES RÉGIONS DE : ATLANTIQUE, COLOMBIE-BRITANNIQUE/YUKON, MID-OUEST ET ONTARIO-NORD/EST

Appel de mises en candidatures pour le poste de directeur de région siégeant au conseil de direction de Radio Amateurs du Canada Inc.

Le Secrétaire de Radio Amateurs du Canada Inc. sollicite des candidatures pour le poste de Directeur pour les Régions de l'Atlantique, la Colombie-Britannique et le Yukon, le Centre Ouest et l'Ontario-Nord/Est (codes postaux K and P). Des élections pour ces postes se tiendront en octobre 2014 pour prendre effet le premier janvier 2014 pour un terme de deux ans.

Candidats sortants :

Atlantique : Everett Price, VO1DK

British Columbia / Yukon: William (Bill) Gipps, VE7ISV/VE7XS

Midwest: Derek Hay, VE4HAY

Nord et est de l'Ontario : Bill Unger, VE3XT (mandat terminé)

1. Le candidat :
   - ✓ doit être membre en règle de RAC
   - ✓ doit avoir atteint l'âge légal de la majorité
   - ✓ doit résider dans la région pour laquelle il est mis en nomination
2. Un candidat ne peut se nominer lui-même.
3. La formule de mise en nomination devra :
   - ✓ être dactylographiée ou imprimée
   - ✓ montrer clairement le nom du candidat, son indicatif d'appel et son numéro de membre chez RAC
   - ✓ montrer clairement le nom, l'indicatif d'appel, le numéro de membre RAC et les signatures originales d'au moins dix (10) membres en règle de RAC
4. Les nominateurs doivent avoir atteint l'âge légal de la majorité et demeurer dans la région du nominé.
5. Chaque candidat doit :
   - ✓ signer la formule de mise en nomination, indiquant son accord d'être mis en nominé
   - ✓ inclure avec la nomination une courte note biographique/CV, limitée à 500 mots, décrivant succinctement ses antécédents et ses qualifications. Un candidat qui désire soumettre sa biographie en anglais et en français se verra alloué 500 mots dans chacune de ces langues. Les notes biographiques ne devront inclure aucun élément de la plate-forme électorale.
6. **Tous les documents originaux de mise en candidature et les documents reliés**, incluant la note biographique, devront être reçus par le Secrétaire de RAC à l'adresse indiquée sur la page 22 d'ici 15h00 le mardii 2 septembre 2014.

Il est suggéré (mais pas obligatoire) que les documents de mise en candidature soient expédiés par courrier recommandé.

Faxed or emailed documents will not be accepted.

- ✓ Clearly indicate on the mailing envelope that Nomination Documents are enclosed.
- ✓ The envelope will be held unopened until after the closing deadline of September 4, 2014. After this date, the Election Committee, under the supervision of the RAC Secretary, will open all submissions, review the documentation for accuracy, completeness and validity, and then announce the results of the Call for Nominations. The decision of the Election Committee is final.
- ✓ Should a balloted election be required in any of the regions, ballots will be mailed from RAC Headquarters on or before October 1, 2014.

Nominations must be sent to the following address:

Secretary, Radio Amateurs of Canada
720 Belfast Road, Suite 217
Ottawa, ON K1G 0Z5

Clearly indicate on the envelope "Nomination Documents".

Les documents expédiés par courriel ou par télécopieur ne seront pas acceptés.

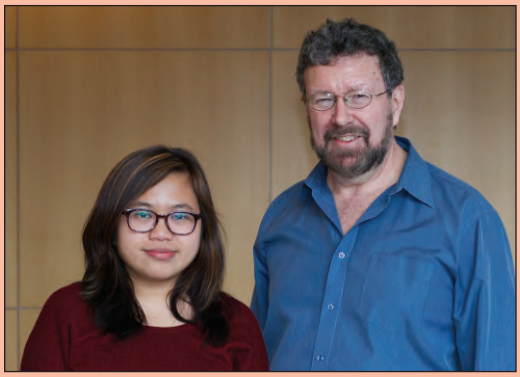
- ✓ Indiquez clairement sur l'enveloppe qu'elle contient des formules de mise en candidature.
- ✓ L'enveloppe restera scellée, jusqu'après la fermeture des mises en candidatures du 4 septembre 2014. Après cette date, le comité électoral, sous la gouverne du secrétaire, ouvrira toutes les candidatures soumises, et vérifiera la documentation quand à sa validité, son exactitude et sa complétude, et annoncera ensuite le résultat de cet appel de mises en candidatures. La décision du comité électoral sera finale.
- ✓ Si une élection était requise dans l'une des régions, les bulletins de vote seraient postés du quartier général de RAC le premier octobre 2014 ou avant.

Les mises en candidatures doivent être envoyées à l'adresse suivante :

Le secrétaire, Radio Amateurs du Canada
720 Chemin Belfast, Suite 217
Ottawa, ON, K1G 0Z5

Indiquer clairement sur l'enveloppe « Documents de mise en candidature ».

RAC SCHOLARSHIP RECIPIENT



Bill Unger, VE3XT
RAC North/East Ontario Director

RAC Vice-President Glenn MacDonell, VE3XRA, and one of the 2013-14 RAC Scholarship recipients, Paulyn Mulles, VE3PJM, met on April 14 as she was completing her spring term and preparing for exams for her final year in Electrical Engineering at Carleton University in Ottawa.

Paulyn, who has achieved both Basic and Advanced Amateur Radio certification, was very grateful to Radio Amateurs of Canada for the scholarship and thanks one of her professors, Dr. Alan Steele, VE3STL, for his work with the Carleton University Amateur Radio Club and for encouraging her to pursue Amateur Radio. She is looking forward to work in RF design after graduation and to continuing her Amateur Radio activities.

RAC is once again offering scholarships to young Amateurs who are taking post-secondary schooling in Electrical, Electronic and Software Engineering. Students in other fields of study will be considered on a case-by-case basis. You must be an Amateur and the deadline for applications is July 31, 2014.

In 2013, RAC gave out three Education Scholarships of $500 each to: Paulyn Mulles, VE3PJM, who is attending Carleton University; Jason Deglint, VE7TJD, who is attending University of Victoria; and Liam Bindle, VE5LRB, who is attending the University of Saskatchewan. Each of these young Amateurs received a $500 academic scholarship to assist their further studies in Electrical Engineering. In their application each one stated how being an Amateur is a good match to their schooling and provides hands-on ability to complement their academic studies.

Details on all four categories of scholarships and applications can be found at Scholarships Canada: http://www.scholarshipscanada.com/

Further detailed information is also available on the RAC website at: https://www.rac.ca/en/rac/donations/foundation/grant-info.php

BÉNÉFICIAIRES DE BOURSES D'ÉTUDES DE RAC

Bill Unger, VE3XT – Directeur de la Région nord/est de l'Ontario

Le vice-président de RAC, Glenn MacDonell, VE3XRA, et une des bénéficiaires des bourses d'études de RAC en 2013-14 RAC, Paulyn Mulles, VE3PJM, se sont rencontrés le 14 avril 2014 pour marquer la fin de la session du printemps de Paulyn et pour préparer son examen final en génie électrique à l'Université Carlton d'Ottawa.

Paulyn, qui a obtenu ses certificats radioamateurs de base et supérieure, est très reconnaissante envers Radio Amateurs du Canada pour sa bourse d'études et remercie un de ses professeurs, le Dr. Alan Steele, VE3STL, pour son travail avec les radioamateur(e)s du Club Radio Amateur de l'Université Carleton, et pour l'avoir encouragée à poursuivre son engagement en radioamateurisme. Paulyn envisage de travailler en design (recherche) RF après sa graduation et de maintenir ses activités radioamateures.

RAC offre encore des bourses d'études aux jeunes amateurs qui prennent des cours post-secondaires en électrotechnique, électronique et informatique. Les étudiants dans d'autres champs d'études seront évalués sur la base du cas par cas. Vous devez être un amateur pour faire application et la date limite à cet effet a été fixée au 31 juillet 2014.

En 2013, RAC a donné trois bourses d'études de 500 $ chacune à : Paulyn Mulles, VE3PJM; Jason Deglint, VE7TJD, qui fréquente l'Université de Victoria; et Liam Bindle, VE5LRB, qui étudie à l'Université de of Saskatchewan. Chacun de ces jeunes amateurs a reçu une bourse académique pour l'aider dans ses études futures en technique ou génie électrique. Dans leur application chacun a écrit comment le fait d'être amateur s'intègre bien à leurs études et y est un atout supplémentaire.

Les détails sur les quatre catégories de bourses et leurs applications sont disponibles à Bourses d'études Canada: http://www.scholarshipscanada.com/

Plus d'informations détaillées sont aussi disponibles sur le site de RAC à : https://www.rac.ca/en/rac/donations/foundation/grant-info.php

– Traduction par Claude Lalande, VE2LCF –

CW SKIMMER

When it comes to contesting and DX chasing, a little technological assistance goes a long way.

Eric Manning, VA7DZ

Do you like to work CW, maybe chasing some DX or working contests?

But do you ever get frustrated by trying to work that rare new DX, in the pileup of callers which it inevitably attracts? You call, and call, and call some more, but no QSO?

This often happens because you didn't call on the right frequency. A rare DX station will usually work *split*, meaning that their transmit frequency is not the same as their receive frequency. (They do this so the QRM doesn't pile up on the transmit frequency so that they can be heard.) Alas, that means that their transmit frequency tells you nothing whatsoever about their receive frequency, about the spot in the pileup where they are listening – and *that* is the frequency where you must transmit to be heard. Even worse, they constantly tune around in the pileup so that all-important receive frequency will constantly change. So, you must just guess where the DX might be listening right now, transmit there and hope for the best. All too often, you guess wrong – and no QSO.

Contests add still another challenge. In most, you're looking for *score multipliers* – stations from certain Provinces, states, countries or zones. You can patiently tune across the band, listening to one exchange after another in the hope of finding that needed multiplier, but you will miss the station that began transmitting after you left their frequency.

The answer to both problems would be to receive and comprehend many CW signals simultaneously, but that's impossible – or is it?

A SOFTWARE SOLUTION

Alex Shovkoplyas, VE3NEA, had this problem – in spades. Like most of us, Alex has a modest station – low power and not a lot of aluminum in the air – but he likes to work DX. So, like all DXers, he used to spend a lot of time calling, and calling – but mostly on the wrong frequency, so no QSO. But, having a background in Electrical Engineering and a love of computer programming,

Note: this article is based on the article "CW Skinner" by the author that was included in the November 2013 issue of QST.

Figure 1: CW Skimmer decoding 486 CW signals simultaneously. The green arrow along the right-hand edge of the waterfall shows the frequency of your receiver.

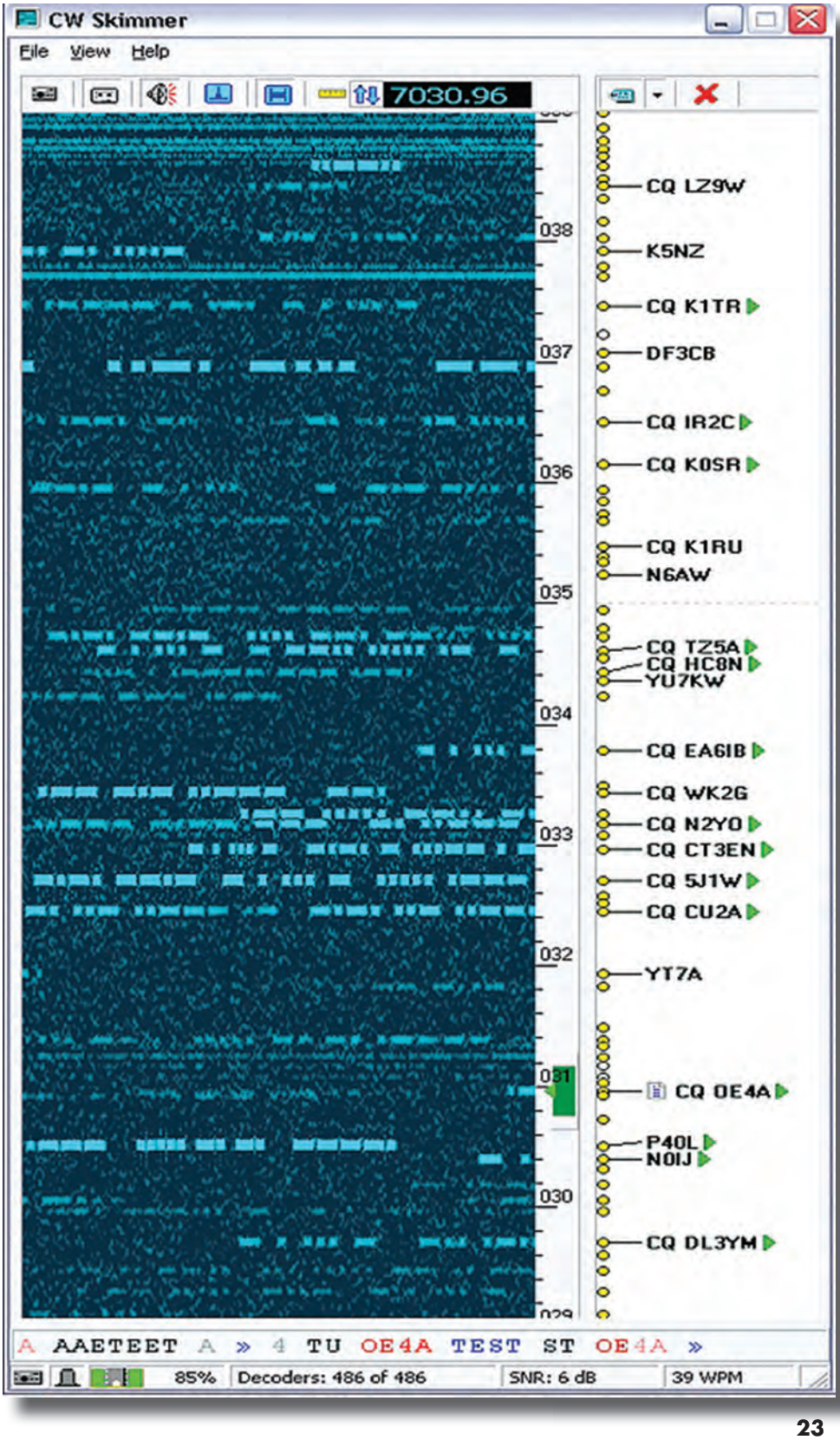
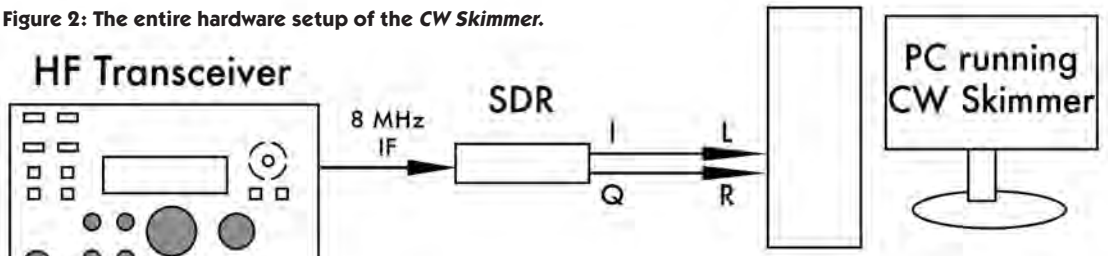


Figure 2: The entire hardware setup of the *CW Skimmer*.



he imagined a program which would let him see *all* of the CW activity in a given chunk of spectrum – all of it simultaneously and all within a single display.

To solve this difficult problem, Alex fed the audio output of his receiver into his computer sound card which *digitizes* the audio signals – converts them into a stream of digital data which the computer's software can process.

Next, he designed and programmed a software module which could accurately decode and display CW call signs. Another software module sorted the call signs and displayed them in vertical ascending order by frequency.

Alex's software also displayed the actual transmitted CW for each call sign in an adjacent waterfall display. The signals appear as strings of dots and dashes; these strings scroll to the left as time passes, allowing Alex to read the CW visually. The result was christened *CW Skimmer*, for its ability to skim the receiver's audio passband and decode all of the CW signals there – all at the same time.

How can this program help you to find the DX's all-important listening frequency? Well, it will be the transmit frequency of Lucky, that lucky guy or gal who just worked the DX. Alex programmed *CW Skimmer* to watch for any signal which contains the numerals 599. Why? Well, if an operator in the pileup is sending 599, he's very likely giving a signal report to a DX station so he's very likely Lucky, the one working the DX right now.

Skimmer displays the 599 in bright red numerals next to the sender's call sign. Presto! If a red 599 suddenly pops up on the screen, you're very likely looking at Lucky, the one who is in QSO with the DX *right now*. Put your transmitter on Lucky's transmit frequency, call as soon as Lucky's QSO ends, and the DX will probably hear you. (This trick is called *tailgating* – it's a very effective way to bust a pileup and work the DX.)

THE BANDWIDTH PROBLEM

Of course, *CW Skimmer* can only process a portion of the band equivalent to the audio bandwidth of the receiver. For most receivers that is about 3 to 6 kHz, which is too little for serious pileups – they often cover 10 kHz or more. What to do?

In modern receivers, most of the filtering is done in the IF stages or after the IF. The receiver bandwidth at the entry to the IF stages is generally 10 to 17 kHz wide or more. If we could get at that IF signal, we could easily decode and display enough of the band to cover most big pileups, say 10 kHz.

***Note:** Many modern receivers bring this IF signal out to a rear-panel jack. It's not hard to add it to other receivers; often a short piece of shielded cable, a .001 capacitor and a panel jack will do the trick.*

But, we can't feed this signal to a PC sound card, which expects audio. It's not audio (0 to 20 kHz), it's an RF signal centred on the first IF frequency of your receiver – perhaps 8 or 10 MHz.

Before we can feed this signal to a PC sound card, we need to mix it down – or convert it – to the audio range of 0 to 20 kHz (sometimes called the *baseband*). We also need a sound card capable of processing such a band of signals.

The sound card part is easy; the sound cards which come with newer PCs are likely 48 kHz wide.

If your PC is getting long in the tooth (like mine) and its sound card can't handle 48 kHz of audio bandwidth, there are wideband sound cards available; they can pass as much as 96 kHz of audio and convert it faithfully to a digital bit stream.

If you use a laptop, get a USB sound card for about $25; the new ones handle 24 kHz. (In any case, the sound card must be stereo and must have Line-In inputs, for reasons explained below.)

This down-mixing problem was harder to solve until the recent appearance of Software Defined Radios (SDRs).

An SDR is a bit like the familiar superhet; it takes in RF signals and mixes them with a local oscillator signal to produce an output at the difference of the two frequencies, also called *down-converting*. However, there are two essential differences with the traditional superhet:

1) The SDR has *no* filters ahead of the mixer so in principle its bandwidth could be "DC to Daylight". (In fact, some of today's high-end SDRs can receive the entire RF spectrum from 0 kHz to 1 GHz; *all* signals in this enormous band are received *simultaneously*.)

2) The SDR mixes the RF signals directly down to the audio band – from zero Hertz upward, the baseband. (Look Ma, no IF!)

For example, if your transceiver has an 8 MHz IF, an SDR covering the 8 MHz range is all you need. (I use Telepost's LP-PAN (http://www.telepostinc.com); I'm told that Softrocks will also do the trick.)

The entire hardware setup is shown in Figure 2 above.

The SDR delivers two outputs. The second one is identical to the first except that it is phase-shifted by 90 degrees; it is used by *Skimmer* to eliminate images.

The sound card must have two inputs (stereo, labeled Left and Right).

Finally, the sound card inputs must be Line-In to handle the higher-voltage signals which the SDR generates. (Mic inputs would be overloaded.)

TALKING TO YOUR RADIO

If you want *Skimmer* to display actual RF frequencies on the screen – and you will if you're a contester or DXer – it needs to receive frequency data from your radio.

In addition, if you'd like *Skimmer* to retune your radio automatically when you click on a call sign (also essential for contesting) then *Skimmer* must send frequency change commands to your radio.

You will need a radio which can send and receive frequency information and other data to your computer, plus a cable to connect the radio's data socket to your computer's RS232 or USB socket. For some radios, you may need a data interface between the computer and the radio.

Finally, if you also run other software which needs to send and receive radio data – for example, a logging program – you will need a software program to share the streams of radio data among all of the programs that need it. This is called a *multiplexer*. Telepost's LPB2 is a popular one (http://www.telepostinc.com).

COSTS AND BENEFITS

To get all of this hardware and software connected up and playing together requires some software savvy and patience. (Dealing with Windows [mis]management of COM Ports can be especially trying.)

There is also a financial price to pay.

CW Skimmer costs $75. An SDR may cost from $50 to $250, and a plug-in USB sound card for laptops is $25. A 96 kHz card for PCs may cost $100.

In addition, *Skimmer* uses a lot of CPU cycles and memory; you will need at least a 2.5 GHz Pentium with 1 GB primary memory.

Finally, your PC's video adapter card must have its own video data memory; adapters which use CPU memory won't do.

When you have collected the components and it's all connected up and running, the results are astonishing.

Many DXers and contesters (including me) consider *Skimmer* to be an absolutely essential tool.

Finally, *CW Skimmer* is the key component, the essential heart of the Reverse Beacon Network, which was recently described in TCA and has revolutionized DX and contest operating.

To learn more about *CW Skimmer*, visit: http://www.dxatlas.com/cwskimmer/

Next, read N4ZR's excellent "Introduction to *CW Skimmer"* tutorial at:

http://www.dxatlas.com/CwSkimmer/Files/Skimmerintro.pdf

Eric Manning was first licensed in 1954 as VE3DPV; his mentor was Al Hunter, VE3DZ. He holds the Advanced Amateur Certificate and is a Fellow of the IEEE, EIC and CSSE. He is also a RAC Maple Leaf Member.

Eric was trained as an Operator, Wireless and Line at the Army Signals School, CFB Borden. He enjoys building, antenna farming, and CW contesting and DXing.

Formerly Director of the University of Waterloo Institute for Computer Research, he is retired from the University of Victoria where he was Professor & Dean of Engineering.

Contact Eric at 1431 – 440 Simcoe Street, Victoria BC, V8V 1L3; va7dz@arrl.net.

Dirk Moraal, VY1NM
Box 75
Tagish, YT Y0B 1T0

RANDOM THOUGHTS...

More Mobile Ideas, North of Sixty

I have an old bush truck.

He is a 1980, 3/4 ton Power Wagon, 360 V8 automatic brute.

The Bush Truck was beat up as a youth and bears the scars. In later life Bush Truck was a "Grandpa's Truck". And when that Grandpa went to the Great Hamfest in the sky, the Bush Truck came to me when I was looking for exactly that kind of old vehicle.

The price seemed reasonable considering there also was a big winch on the front bumper. The first time I used that winch it flew apart, which naturally happened while I was stuck on a muddy road.

That story has nothing to do with this article; it is just that I still like to think about it now and then. One virtue the Bush Truck has is being good at hauling firewood logs out of the forest. Virtue number two is that Bush Truck measures a full 22 feet in length. Number three is the huge amount of room in the Club Cab.

But to answer the simmering question, that length is good because if you do the math, 1/4 λ at 14.140 MHz is just over 17 feet and fits nicely in the available space, as well as 1/8 λ on 40 metres (I know some of you are ahead of me already).

I have long wanted to turn that truck into a hamshack. How long is your old Caddy, Bob?

1/16 λ on 75 metres may be a bit of a stretch but this is an experimental hobby, so carry on, the old Bush Truck is paid for and if I have to weld metal to it for the required ground, it could be done. Besides, the new winch cable might do yeoman duty as a ground radial. Maybe I could reach The POW WOW Club, so if you are having trouble sleeping from lack of radio activity, tune in to 3750 from about 0400 Zulu every night except contest QRM nights, from October to April, and say hello to Gerry, VA3AAG and Larry, VE5LBD, or one of the host controllers, as they welcome checkins from all over, starting in the east and ending in the north.

In case you are wondering, I wandered from the subject. I was referring to phasing two verticals in a mobile application. It has been done before, and you have probably seen transport trucks with the twin GRS (aka CB) antennas mounted on the mirrors. We used to be able to buy a kit at some truck stops back in the 1970s. The problem to overcome was where to a find 1/4 or 1/8 λ space to fit the array. A 1/4 λ at 27 MHz is 9.1 feet and just fits nicely in the space between those big "west coast" truck mirrors.

I may be wrong, but I believe there is a very simple phasing line one can build – using the Christman method for phasing two vertical antennas – and I was wondering if we arranged the antennas so that the one on the front of the vehicle is the lagging antenna, would we be able to "rotate" our array by parking the vehicle facing in the desired direction. We would need to decide if we want the setup to transmit broadside or end fire as that will dictate antenna geometry, phasing line construction, and the way we park the vehicle. No need for the more complicated 4-square arrays, but don't let that stop you from trying to make one!

To make my life easier, I decided to start with a 40 metre setup and just two antennas as it involved minor modifications to the vehicle. An order went out to A Big Radio Store in Toronto for a pair of continuously loaded whip type antennas, triple magnet bases, and the adaptors for joining the antennas to the bases. While I wait for the parts to arrive – the normal unusual long process due to distance, shipping and the inevitable availability delays – I am going to do some book work.

Some pointers I picked up so far may be worth passing on.

1) Casual designs have a low rate of success.

2) Simply putting two elements near each other and feeding them in phase reduces the array gain to that of a single element, but if you have a lossy system such as a short vertical with poor grounding, you can improve gain by several dB with close spaced elements and ground system, fed out of phase.

3) The most gain is usually obtained with 135° out of phase, quarter-wave verticals spaced 1/8 λ apart.

4) Verticals are preferred because the proximity to ground does not limit control over the amount of current in each element.

5) The major problem to overcome is element feedpoint impedances which are much affected by mutual coupling. In driven arrays mutual coupling often has more effect on antennas than the array feed system.

6) Given no loss, the field from a very short antenna is about 1/2 dB below that of a 1/4 wave vertical. In that case, the only difference between a short and a long antenna would be small differences in pattern.

7) As a rule, a simple phasing line design can be used if all elements are identical and Z_o of the feedline matches that of each element feedpoint.

8) Low loss ground is needed. Desert terrain precludes the use of vertical arrays and one must adopt an array made of horizontally polarized elements. But I wonder if this could be avoided by using the metal body of the vehicle as a ground.

9) Phasing verticals is often as magical as 6 metre propagation. It is entirely possible to luck onto a very serviceable phased array. But more often than not this does not happen. The problem is that so many variables interact in so many ways that each installation is unique.

You can design your simplest two-element phased array with *Arrayfeed1*, found in *EZNEC-ARRL*. It involves tasks such as measuring the coax to locate points of equal line feed voltage, for example. Or if you are like me and live in the bush, and EZNEC will not work on your computer, or just prefer the long hand way (it is all hobby busy-work after all, and it keeps me out of other kinds of trouble), you could use published, pre-calculated electrical lengths for your phasing line such as one of the examples described in

Low Band DXing, by ON4UN, Chapter 11. This is a learning process for me and if I live through it I hope to be able to understand phased verticals a lot better. Besides, computers are noted for giving what seem to be unequivocally correct answers which are wrong. G. I. G. O.

The phasing line calculation formula that Larry, VE5LDB, sent me is a good place to start tinkering. It is very useful for those who do not yet have an analyzer. It also lets us blame Larry if things don`t go right.

Larry wrote:

"In feet 1/2 λ in free space is 492 divided by the frequency. Using 7.185 we get 492/7.185=68.47599165 which is multiplied by the velocity factor (VF) of the coax, (we will use .66) so we end up with 45.19415449, meaning that's a half-wavelength of coax with a .66 VF at 7.185 MHz. How many degrees in half a wavelength? 180. Let's divide the length of the half-wave coax by 180. We get 0.251079636 feet per degree at the desired frequency. Now multiply feet per degree by the electrical degrees you want. If you want 71 degrees, 0.251078636 x 71= 17.82658316 feet. If you want 84 degrees, 0.251078636 x 84= 21.09060542 feet. If you don't want to measure coax to 8 decimal places of a partial foot multiply the answers from your calculations by 12 and measure the coax in inches... or use 5904 (492 x 12) from the start and figure everything in inches."

Here is my modification of Larry's formula assuming I use 1/8 wave separation between 1/4 λ antennas.

123 / frequency in MHz X velocity factor of the coax / 45 (45 is the number of degrees in 1/8 λ) = gives you feet per degree at the desired frequency. (This big long number gets stored in my calculator). The antenna plans in *Low Band DXing,* pages 11-35, give us the electrical degrees of length for a working array, so multiply electrical degrees of length by your calculated feet per degree and that should be how long you cut your coax.

I used 299.79 / frequency in MHz to get wavelength for element spacing. In feet, a half-wavelength in free space is 492 so it follows that 1/8 wavelength in free space is 1/4 of that or 123 which I used in the calculations. Since a 1/8 wavelength at my design frequency on 40 metres will be 299.75/7.080 = 5.2929 metres or 17.365 feet, the antennas should just fit on the Bush Truck.

Let us do a dry run using an array ON4UN calls a 1/8 wavelength spaced cardioid, which means that the radiation pattern makes a rounded sort of heart shaped pattern with the blunt "tip" in the direction of maximum gain. It should give almost a 1:1 SWR on a 50 λ feedline with about 4 dB gain over a single vertical, without the need for a matching network. It needs two coax lines 157 electrical degrees long and one coax line 39 electrical degrees long. RG-213 coax is listed as having a velocity factor of 0.66.

So...

123 / 7.080 X .66 / 45 = 0.25480226 feet per degree at the design frequency.

0.25480226 X 39° = 9.937288136 feet of coax. (Like Larry said, we could multiply by 12 and measure the coax in inches) and...

123 / 7.080 X .66 / 45 = 0.25480226 feet per degree at design frequency.

0.25480226 X 157° = 40.00039548 feet of coax.

Now let's put it together. We need to bond the box to the cab and the cab to the hood of the truck with pairs of half-inch wide braided straps. Then bond engine block to chassis. In fact, bond everything you can, body, frame, even the exhaust system, to make a good ground. Double bonding is important as vehicles develop rust and rust is a resistor. Old coax braid will work well.

Using two identical triple magnet bases rewired with the required RG-213 or other .405 coax (do find out the velocity factor of the coax you use), set out the bases at a measured 1/8 wavelength from a point on the hood to a point in the truck box. Then assemble the two antennas and tune them individually to resonance at exactly 7080 MHz (or your frequency of choice.)

Remembering mutual coupling, make sure the antenna heights are the same, by raising the radiators if needed to clear the height of the cab. After coiling up the excess coax, and again remembering mutual coupling, install several snap-on chokes or a coiled coax common mode choke on each end of every length of coax and also on any control wire.

I was advised to do this with any mobile installation by Ken, KØHL, who uses his pickup truck as a hamshack, mostly to keep the peace in his household, but also because of the magic of mobile. He has a gas generator running in the back to power his 600 Watt amplifier as he trundles down the highway talking to folks. During our half-hour mobile QSO, he told me he is capable of consistent worldwide contacts from his rig. His antenna is over 14 feet tall. He also has no tunnels or low overpasses in his home state of North Dakota to worry about. He did not mention low hanging Hydro wires. Yet.

Grounding is important and the bases of the antennas are bonded to the vehicle. Phased vertical arrays require good grounds, equal in area and bonded between them so I assume the same would apply to a phased array mounted on a truck. Something to keep in mind, as this may dictate where you position the antennas. I was worried about the cab being between the two verticals, and at one point considered elevating the whips on masts to raise them high enough to "get above coupling problems".

My sources of information were *Low Band DXing* by ON4UN and *The ARRL Antenna Book*. ON4UN also has or had a companion antenna program that might be worthwhile owning. I found that *The ARRL Antenna Book* has almost the same information but does not seem to give as many easy steps to follow as ON4UN.

Caution: Remember to make sure the antennas bases, the base /adaptor and the antenna itself are strong enough to withstand travelling down the freeway at high speed. In the past the antenna to base adaptors proved to be the weak point in other installations. It might be better to dismount the antenna from the base for travelling, and reinstall for use.

But did mine work? I don't know yet. I'm still waiting for my parts shipment. When yours is complete, write TCA so I can read about it.

Small phased arrays may be the answer for DX as opposed to larger arrays that are out of reach either physically or financially for many of us.

CALL FOR NOMINATIONS / MISE EN NOMINATION

THE CANADIAN AMATEUR RADIO HALL OF FAME

Any resident of Canada who holds a current Amateur Radio Operator Certificate issued by the Government of Canada, or any Canadian Amateur Radio organization, other than Radio Amateurs of Canada, may submit a nomination for Member of the Canadian Amateur Radio Hall of Fame. Membership in RAC is not mandatory.

Any resident of Canada who holds a current Amateur Radio Operator Certificate issued by the Government of Canada, except a Radio Amateurs of Canada employee, officer, Director, Assistant Director, volunteer manager, or leadership official in the Field Organization, may be appointed as a Member of the Hall. Membership in RAC is not mandatory. Any eligible person may receive an appointment as Member of the Hall for outstanding achievement and excellence of the highest degree, for serious and sustained service to Amateur Radio in Canada, or to Amateur Radio at large.

Nomination or appointment for Member or Honorary Member of the Hall may be after the death of the nominee.

A person who is not a resident of Canada may be appointed only as an Honorary Member of the Hall. The other requirements for appointment as Honorary Member of the Hall are the same as for Member.

Only the RAC Board of Directors, by majority vote, is allowed to nominate candidates for Honorary Member (those persons not residents of Canada). Because of the requirement for Canadian residency for appointment as Member of the Hall, it is incumbent upon the nominator to confirm the Canadian residency of a nominee prior to submitting a nomination.

Nominations shall be submitted to the Board of Trustees using the Canadian Amateur Radio Hall of Fame Nomination Form which is available on request from RAC Headquarters or for download from the RAC website at https://www.rac.ca/en/rac/programmes/hall-of-fame/nominations.php.

All nominations shall include a biographical sketch or curriculum vitae. Three references shall be included for Member of the Hall.

All nominations for Member of the Canadian Amateur Radio Hall of Fame must be received at RAC Headquarters by the close of the last business day of September.

Late nominations will be considered in the next year. Once received, all handling shall be conducted in a secure and confidential manner. On or before the last business day of November, the Chair of the Board of Trustees for the Hall of Fame shall advise the Custodian (RAC) of the decisions of the Board of Trustees on appointments for the calendar year.

The Board may appoint a person who has been nominated in a previous year. For this reason, no advice shall be issued to the nominator that the nomination has not resulted in an appointment, nor any reason given why an appointment has not been made as a result of that nomination.

TEMPLE DE LA RENOMMÉE DES RADIOAMATEURS CANADIENS

Tout résident du Canada qui détient un certificat régulier de radioamateur émis par le gouvernement du Canada, ou toute organisation radioamateure canadienne autre que Radio Amateurs of/du Canada, peut proposer une candidature au titre de membre du Temple de la Renommée des Radioamateurs Canadiens. Être membre de RAC n'est pas obligatoire.

Tout résident du Canada qui détient un certificat régulier de radioamateur émis par le gouvernement du Canada, sauf un employé de Radio Amateurs of/du Canada, dirigeant, directeur, assistant directeur, gestionnaire bénévole ou chef attitré dans l'Organisation sur le terrain, peut être choisi comme membre du Temple de la renommée. Être membre de RAC n'est pas obligatoire. Toute personne éligible peut être admise au Temple de la renommée pour réalisations hors du commun et de haut niveau relativement à son engagement sincère et soutenu envers le radioamateurisme canadien, ou le radioamateurisme en général.

La mise en nomination ou le choix d'un membre régulier ou honoraire au Temple de la renommée est possible à titre posthume.

Une personne qui ne réside pas au Canada peut devenir membre du Temple de la renommée à titre honoraire seulement. Les autres prérequis de mise en nomination honoraire sont similaires à ceux réservés au membre.

Seulement le Bureau des directeurs, majoritairement, est habilité à nominer un candidat honoraire ne résidant pas au Canada. En raison de l'obligation de résidence canadienne pour une nomination au titre de membre du Temple de la renommée, il est impératif pour celui qui nomine un candidat de s'assurer de sa résidence canadienne avant de présenter sa candidature.

Les mises en nomination devront être présentées au Conseil d'administration du concours (Board of Trustees) au moyen du formulaire "Canadian Amateur Radio Hall of Fame" disponible sur demande au siège social de RAC. Le formulaire peut être téléchargé à partir du site web de RAC à https://www.rac.ca/en/rac/programmes/hall-of-fame/nominations.php. Toute nomination doit inclure un résumé biographique ou un curriculum vitae (CV) du candidat. Trois références doivent accompagner le formulaire de mise en candidature.

Toute mise en nomination au Temple de la Renommée des Radioamateurs Canadiens doit arriver au siège social de RAC avant la fin du dernier jour ouvrable de septembre.

Les mises en nomination retardataires seront prises en compte l'année suivante. Une fois reçue, la mise en nomination sera traiter de façon sécuritaire et confidentielle. Le ou avant le dernier jour ouvrable de novembre, le président du Conseil d'administration du Temple de la renommée avise le responsable (RAC) de la décision du Conseil relativement aux mises en nomination de l'année.

Le Conseil peut nommer une personne nominée l'année précédente. Pour cette raison, aucun avis ne sera fourni au proposeur lui indiquant que la mise en nomination est demeurée sans résultat, ni tout autre raison indiquant le non choix du candidat.

CALL FOR NOMINATIONS: RAC AMATEUR OF THE YEAR AWARD

To qualify for the title "Amateur of the Year", an individual should have made an outstanding contribution to Amateur Radio in the past year, or have contributed consistently to the welfare of Amateur Radio over several years. RAC Directors, Officers and Section Managers are not eligible for the award while in office, and not in respect to their term(s) of office.

Nominations with supporting documentation are to be addressed to the Secretary, RAC, and received at RAC Headquarters by the close of the last business day of September, for consideration for the current year.

Selection of the winning candidate will be by majority vote of the RAC Board of Directors based on the supporting documentation submitted with the nomination.

The winning candidate will be notified by mail.

Due recognition will appear in *The Canadian Amateur* and a suitable plaque will be presented at an appropriate time and place.

MISE EN NOMINATION : PRIX AMATEUR DE L'ANNÉE DE RAC

Pour se qualifier au titre « Amateur de l'année », une personne doit avoir fourni une contribution hors du commun à la cause radioamateure au cours de l'année qui se termine, ou avoir travaillé substantiellement au bien-être du radioamateurisme depuis plusieurs années. Les directeurs de RAC, dirigeants et gérants de section ne sont pas éligibles au Prix aussi longtemps qu'ils sont en fonction, et sans considération quant à leur(s) mandat(s).

Les mises en nomination, documentées, doivent être envoyées au secrétaire de RAC de manière à ce qu'elles parviennent au siège social de RAC au plus tard à la fin du dernier jour ouvrable du mois de septembre pour être prises en considération la même année.

Le choix du candidat gagnant est effectué à la majorité des membres du Bureau des directeurs, basé sur la documentation accompagnant la mise en nomination.

Le candidat gagnant est avisé par la poste.

The Canadian Amateur (TCA) publiera un texte de félicitation et une plaque sera remise au récipiendaire en temps et lieu appropriés.

RAC AT DAYTON 2014

Once again this year's RAC presence at Dayton's Hamvention – the fourth year in a row after a 10-year hiatus – was an overwhelming success.

Over the weekend, hundreds of visitors signed our Guestbook, adding to the long list from the previous four years.

As well as the Amateur Radio Relay League in attendance there was also the International Amateur Radio Union, the Radio Society of Great Britain, the Deutsche Amateur Radio Club and the Qatar Amateur Radio Society. Their presence allowed Canadians to gain a view on events and trends other than in North America.

Numerous Amateurs from several countries stopped in and chatted up our many volunteers and RAC officials on various topics such as our valuable Club Insurance program, membership types, Canadian operating rules, our bandplan, DX, contesting, call sign policy for foreigners and more. Many memberships were renewed and new ones were added as well. The new eTCA membership is available to US Amateurs at the same cost as to Canadian Amateurs.

RAC seized on this opportunity and distributed information fliers, copies of TCA, marketed our TCA advertising program to vendors, and tried to provide small gifts to each of our members – until we ran out!

RAC officials available to answer questions were: Geoff Bawden, VE4BAW (President); Glenn Macdonnell, VE3XRA (Vice-President); Derek Hay, VE4HAY (Midwest Director); Bill Unger, VE3XT (Ontario North/East Director); Mitch Mitchell, VE6OH (Alberta/NWT/NU Director).

Also in attendance were: Dave Goodwin, VE3AAQ (former RAC President); Norm Rashleigh, VE3LC (former Radio Adivsory Board of Canada representative); Richard Ferch, VE3KI (former Regulatory Affairs Officer) and Frank Greene (RAC Office Manager).

RAC would like to thank the following volunteers (our apologies if we missed anyone): Ian MacFarquhar, VE9IM (former Vice-President who worked at the RAC Booth, met with our insurance team and met with vendors to procure advertising for TCA); Ken Clarke, VE7BC, Geoff Smith, VA3GS and Barry Allison, VE3NJK (RAC members who responded to our call for volunteers); Jerry Beneteau, VE3EXT (a member of our insurance team and an insurance expert).

"A big thank you is in order for our Booth volunteers, staff, as well as RAC officials who made the trip down and contributed to its success. We are definitely planning on returning for 2015. This venue is a very valuable opportunity for our organization" – says RAC President Geoff Bawden, VE4BAW.

Top (from left): Derek Hay, VE4HAY; Glenn Macdonnell, VE3XRA and Frank Greene.

Bottom: Norm Rashleigh, VE3LC, Bill Unger, VE3XT and Dave Goodwin, VE3AAQ.

FT5ZM AMSTERDAM ISLAND DXPEDITION

"FT5ZM Amsterdam Island is now just a memory. But what a memory!"

Steve Wright, VE7CT

Photos by Nodir, EY8MM

No one on our chosen team or anyone on the Island's French team knew what to expect. Everything would be new. Could we get along with each other knowing for the most part they only knew French and we English?

What would be expected of us. What could we expect from them? Could it, would it be workable? Within two days the answer became clear. Not only would it work, it would work beyond all of our expectations and when the time came for us to depart, emotions would run high on both sides almost coming to tears. Our team and theirs had become one. We shall never forget!

The Team at takedown. The *Braveheart* is in the background. From left: VA7DX, N2OO, VE7CT, UA3AB, K9CT, WB9Z, K4ZLE, N6HC, K0IR, K4UEE, FM5CD, LA6VM, EY8MM and HK1R.

For nearly two years Ralph Fedor, K0IR, had been working on an Antarctic area DXpedition. At first the sights had been set on VK0 Heard Island, but due to a surprise announcement from another source it was decided to abandon the idea and look for an alternative location. Due to the rarity of some of the Southern French possessions, Amsterdam Island became an Island of choice since it was well within the top most wanted DXCC entities worldwide ranking about number 4 or 5.

Following many inquiries and the selection of those team members from previous expeditions with whom Ralph was familiar, the team was chosen. With Michel, FM5CD – an original French citizen and fellow team member with a total command of the French language – the course was set and followed to contact all those within the French administration to secure the appropriate licensing and landing permits to proceed with the expedition planning.

The ship of choice was the *Braveheart*, well known in hamdom for its voyages on behalf of DXCC to the islands of Antarctica, but more importantly for its crew – a crew that was well acquainted with Amateur requirements and that knew what was expected and how to improvise when necessary to help solve the unknowns that always arise during expeditions.

The team was chosen with a maximum number of 14 members and assembled in Fremantle, Australia on January 10 and 11. We remained in Fremantle a few days awaiting the *Braveheart*, which was on the way from its home country, New Zealand.

Our team consisted of an international group which included many Amateurs I already knew from previous expeditions. They were: Nodir EY8MM, Michel, FM5CD, Jorge, HK1R, Bob, K4UEE, Jay, K4ZLE, Craig, K9CT, Ralph, K0IR, Erling, LA6VM, Bob, N2OO, Arnie, N6HC, Andy, UA3AB, Neil, VA7DX, Steve, VE7CT and Jerry, WB9Z.

We had extraordinary luck in that we all were met at the Perth airport by members of the North Corridor Radio Group and taken to our hotel both on our arrival and also our departure following our return to Fremantle.

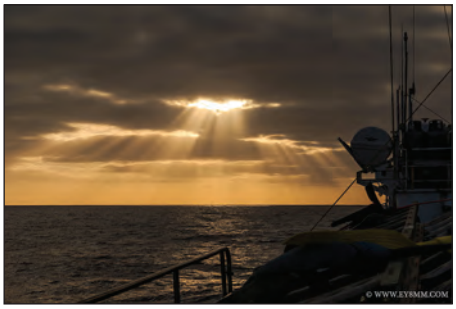
The four days spent awaiting the *Braveheart* found us picking up last minute items for the trip as well as thoroughly cleaning some 30 pieces of 10-foot aluminum tower sections that the Australians loaned to us. Light as a feather and a godsend since we did not have to ship them from the USA. They turned out to be wonderful for the yagis we had in terms of their erection and takedown.

Nigel Jolly, the ship's owner, flew in from New Zealand to meet us and to assist with last minute loading and refueling the *Braveheart*. Unfortunately, he could not join us due to another commitment but we were to be in good hands with his son Matt (a skilled seaman in his own right) and the rest of the *Braveheart* crew of five.

The *Braveheart*

The night before we departed for Amsterdam Island, Steve, VK6IR and his wife, hosted a Barbie in the backyard of his rented house. While we would be away he was to move to another location until he and his wife could find the place of his ham dreams.

On the following day, January 13, we were taken to the port to board the *Braveheart*, remaining on board until the Customs Agents arrived to give us the clearance to leave. After picking up the pilot we were escorted out to sea to begin a nine-day trip to FT5ZM.



While the time spent aboard the *Braveheart* was basically meaningless, it did give everyone a chance to get to know those they had not previously known.

We had some days of rough weather with seas up to the occasional 10 metre swells, but we also experienced some very calm seas with an almost glassy surface. The only life we sighted were a couple of whales, the occasional albatrosses and petrels until we got closer to Amsterdam Island. Of course, seasickness was apparent with some of our team but the majority seemed to survive the rough weather. Most of us wore the scopolamine patches to help ward off *mal de mer* until we gained our sea legs. The food was great for those who were able to pack it away during the voyage. Most of the time was spent reading or chatting as well as sleeping until we arrived at the Island early on January 24.

Amsterdam Island is located in the south Indian Ocean due south of the Maldive Islands at close to the 37th parallel of latitude. That would equate it to northern California which is around the 37th parallel north of the equator. The climate is fairly temperate with warmer weather when winds are from the north and cooler when from the south. Due to the main "mountain" on the Island (Mont de la Dives, an extinct volcano or at least dormant), it creates its own weather system and tends to be quite rainy during the winter periods. Very unlike the other French Islands further south that are greatly affected by the close proximity of the Antarctic. Amsterdam is alone with no other land mass for hundreds of miles around. As a result, the 20 French individuals who inhabit the base on the Island are on a tour of duty for one year until they are relieved by a new incoming group. At the moment, this is the 65th group to occupy the Island. Most are between their early twenties and mid-thirties although the Chef and one other person were likely in their mid-forties.

The Island used to support feral cattle but they have been removed and there are many concrete fence posts that still exist to keep them contained to specific areas. These would become very useful as anchors for our 20- and 30-foot towers. There are some feral cats to hunt the rats that came aboard ships over the many years and we saw signs of both. I also saw only one land-type of bird about the size of a sparrow, but they are not in large numbers – possibly due to both the rats and cats. Seabirds such as Giant Petrels, Skuas and Albatrosses are prevalent and the Macaroni and Rockhopper Penguins apparently abound at the south end of the Island. We were based at the north end where the only concrete wharf exists to serve loading and offloading purposes.

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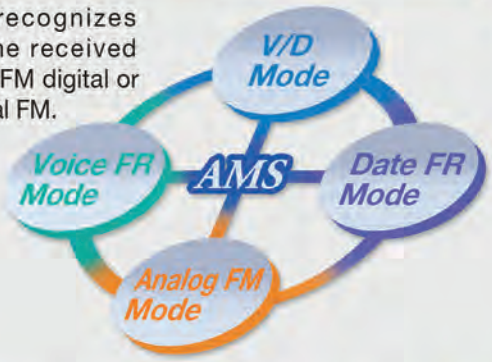

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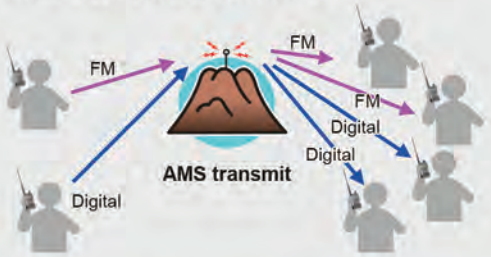

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C4FM Digital Clear Voice
Clear and Crisp Voice Technology

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- Automatic Mode Select (AMS) Function
- 3.5-inch Full Color Touch Panel Operation
- Snapshot Picture Taking Capability
- Digital Group Monitor Function
- Smart Navigation Function

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An amusing part of the wharf experience are the occupants. Sub Antarctic Fur Seals and the Elephant Seals make it their tanning beach. We saw as many as 12 Elephant Seals plus the same amount of Fur Seals on the wharf. Elephant Seals can weigh up to two tons and they do not like to have to move. Usually, a large Front End Loader backing toward the seals with the backup alarm beeper is the persuader of choice. Of course, it is necessary to clear the way when loading or offloading is required. Some move just far enough away as to not impede things and are perfectly content to lie there peacefully, but always with one eye open to make sure we are not too close to them. They will bite and serious infection can result.

On the morning of our arrival following the anchoring of the *Braveheart,* a few hundred metres offshore, we were greeted by the Commander of the Island and an assistant who came onboard to inspect our gear for any signs of foreign material such as seeds or chemicals as a precaution against introducing anything that could threaten the environment of the Island. Today, this is true of just about all Islands worldwide that are considered a Nature Conservation area.

Following clearance, the *Braveheart* crew set about the unloading and transportation of all our gear to shore where the French team, with tractors and a truck crane, were there to take our equipment to the three sites designated for our operation. One site, Mataf, was only about half a kilometre away from the base. The other site, Antonelli, was some three to four kilometres away from the Base and at an elevation about 600 metres above the Base on the edge of a volcanic caldera. The Base itself is where we would sleep and shower, two to a room in a barracks type of building, unless we were at one or the other operating sites.

Since we were not allowed to travel to either site at night, once one was there he was there for the night, but there were sleeping facilities at both locations albeit in somewhat crowded conditions.

The same day we landed we immediately got to work at Mataf to set up five 30-foot towers with yagis for 10, 12, 15, 17 and 20 metres with verticals for 30, 80 and 160 metres. Operations started as soon as the antennas were erected since we only had 18 days on the Island to put together, operate and dismantle all our antennas and gear. There were three generators at Mataf that were housed in makeshift plastic housings that had been the extra diesel fuel tanks on board the *Braveheart*, fuel that we had used up first after leaving Fremantle. This was to protect the environment in case of a spill. From that time on, the *Braveheart* crew looked after refueling as well as bringing food to each site for those who were stuck there for the night. They also assisted us in all the set up of equipment and antennas.

The next thing was to get Antonelli on the air and those who were not operating walked to Antonelli to install all of the antennas and equipment. The walk was very tiring to most since we did not have a chance to exercise onboard the ship and it was uphill virtually all the way on a trail that wasn't exactly like a schoolyard track.

Mataf operating site

For those in relatively good shape the walk was 45 minutes at a steady crisp clip. For some it took longer but after doing it several times it did get easier as conditioning improved. Installing antennas and laying radials at the Antonelli site was exhausting work due to the deep grass and reeds that grew there, plus the hidden lava holes that one could trip on and sink into the ground. Even after installation of the yagis, just turning an antenna via a rope attached to the boom end could be tiring from fighting for footing.

I have to say that the pileups were huge whenever the bands opened up as the radio conditions were generally very good. It was said that we did have almost unbearable interference – both deliberate and unintentional – along with the proverbial ever-present DX cops. Perhaps some day these individuals will finally learn to control their frustrations. From our end though, we just kept on trucking and piling up the contacts to the extent that after all the dust settled we had over 170,000 contacts in the log on all bands and three modes, CW, SSB and RTTY.

A few days after getting on the air it was found that we were interfering with instruments that measured the earth's magnetic field on 80 and 40 metres from the Mataf location which was closest to the Base. There was some talk that we may have had to shut down our operation. We immediately shut those stations down and transferred all the operation on those bands to the Antonelli site after determining that we were indeed at fault. The Base Commander and his superiors back on Reunion Island and in Paris were impressed at our immediate cooperation and solution to the problem. For us, it was business as usual.

Nodir, EY8MM, is passionate about low band operation. Our antenna at Antonelli was a spiderbeam telescopic fibreglass whip with a top loaded wire. He was not impressed with it and swore that he would not leave Antonelli until an improvement was made. In cooperation with Erling, LA6VM, they used five sections of tower plus the fibreglass and wire for a beautiful quarter-wave vertical insulated from ground using three large caps from the plastic shipping tubes for the yagi antennas, as well as a waterproof Russian-made tuner at the base of the antenna and some 36 radials. We were told our signal was outstanding on 160 metres.

Antonelli operating site

What really made our stay memorable was the total integration of our team with the French 65th Mission team. Those who worked the daylight shift or were off shift from Antonelli and had come to Base to shower and sleep would assemble at 6:30 each evening and wait for Willy, the bartender to come, then all would have Happy Hour until 7:30 pm when dinner was served, usually with a bottle of wine to accompany it.

Even though most of the French team members did not speak much English – and many of us tried with long, almost forgotten, high school French – we all got along and had fun. Each day, one of us would be teamed with one of the French members to clean the breakfast tables and vacuum then swab the floor of the communal dining area. This was known as "Petit Marie" and we would assist during the other meals if required.

Some of the food preparations by our Chef Francis were outstanding. He was particularly adept with desserts and on Sundays would BBQ freshly caught fish on the stone BBQ outside. Truly magnificent creations and all of us, without exception, did not lose weight while on the Island, which is not usually the case with an expedition.

When the time came to leave we were told that the weather was changing rapidly and that we would likely be stuck for an extra four or five days beyond the planned takedown day. Of course, we all had travel plans and had allowed extra days just in case. However, looking at a nine-day return at the earliest, it was decided to start taking equipment down and loading it on the *Braveheart*. Once again the crew was outstanding but they could not finish loading the first loads from Antonelli that day. The swells were crashing against the wharf in high plumes of spray so the loading had to stop until the following day. We continued to take down everything at Mataf that afternoon.

The following day we were told that we must be ready to leave at a moment's notice as it appeared we would get about a two-hour window of opportunity – and if not to be prepared to stay on the Island. The opportunity came and loading continued plus our chance to get off the Island, two at a time in the Zodiac. Mission accomplished!

It was a bittersweet moment standing on the ship waving goodbye to our new friends. All of us felt a twinge of regret that could only be neutralized by getting underway as soon as possible and not looking back but focusing on returning to our homes and families.

I can honestly say that for me this was the best DXpedition of all. I cannot conceive of having a better experience in the future – unless I can return to Amsterdam Island!

Our thanks go out to all of our sponsors. Our largest donations came from the Northern California DX Foundation and International DX Association along with other foundations, many, many clubs and individuals helping the cause. Their logos and a listing can be found on our website at http://www.amsterdamdx.org.

Of course, there were many corporate sponsors lending us the equipment for the expedition. Their generosity and the trust they extended to us helped to make it all happen. Their logos can also be found on our website.

I would be remiss if I did not mention the terrific support given to us by the VK6 Amateurs who went beyond the call of duty to help keep our costs of shipping down, with the loan of their tower sections and transporting us back and forth – as well as entertaining us with the traditional Aussie Barbies. They are such a fun group.

Lastly, our thanks go to our teammate and fantastic photographer Nodir Tursun-Zade, EY8MM, also a terrific operator. Many of the pictures in my PowerPoint presentation was his work as well as some here in TCA magazine.

Born in Great Britain in 1937, Steve came to Canada in 1947. He is now retired after working in communications until 2003. First licensed in Winnipeg, Manitoba on May 24, 1957 as VE4SW, he changed to VE4XJ one year later and held this call sign until 1980 apart from three years (1967 to 1970) in Regina, Saskatchewan as VE5XJ. He moved to British Columbia in January 1980 and had call VE7EXJ for five years until receiving VE7CT in 1985. He married in 1963 and has one daughter. Steve is active in WAZ, WAS, DXCC mixed 340/370 Honour Roll and his preference is DXing and CW.

Steve was a team member of the following DXpeditions: 1990 3D2AM Conway Reef; 2000 K5K Kingman Reef; 2005 K7C Kure Atoll; 2007 VU7RG Agatti Island Lakshadweep Group; 2009 K5D Desecheo Island; 2010 PJ6A Saba Island (10/10/2010 New Entity); 2012 HK0NA Malpelo Island; and 2014 FT5ZM Amsterdam Island.

The two "CTs" at Antonelli VE7CT and K9CT

Except for Malpelo Island, all of the above entities were in the world's top 10 most wanted at the time. Malpelo was ranked number 12. Nothing gives me more pleasure than to give the Deserving an all-time new one.

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2/3 page vert. (2 col.)	4 7/8 (4.875)	9 3/4 (9.75)	$440	$374	$293
1/2 page horiz. (3 col.)	7 3/8 (7.375)	4 7/8 (4.875)	$376	$320	$251
1/2 page vert. (1.5 col.)	3 5/8 (3.625)	9 3/4 (9.75)	$376	$320	$251
1/3 page horiz. (3 col.)	7 3/8 (7.375)	3 1/4 (3.25)	$332	$282	$211
1/3 page square (2 col.)	4 7/8 (4.875)	4 7/8 (4.875)	$332	$282	$221
1/3 page vert. (1 col.)	2 3/8 (2.375)	9 3/4 (9.75)	$332	$282	$221
1/4 page (1.5 col.)	3 5/8 (3.625)	4 3/4 (4.75)	$264	$224	$176
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1/6 page vert. (1 col.)	2 3/8 (2.375)	4 7/8 (4.875)	$176	$150	$117
"Business Card"	3 5/8 (3.625)	1 3/4 (1.75)	$88	$75	$59
1/12 page sq. (1 col.)	2 3/8 (2.375)	2 3/8 (2.375)	$80	$68	$53
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Note: the deadline for the next TCA is July 15; followed by September 15, November 15 and so on.

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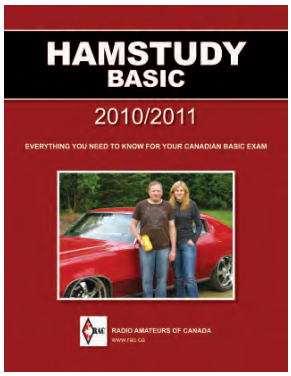

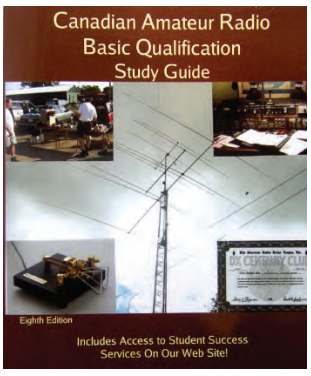

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YL NEWS AND VIEWS

Val Lemko, VE5ACJ
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Hello everyone. First off, I have a few corrections to my last column. My apologies to Liel and her family for the mistakes.

The photo of Liel was actually taken at the Cedar Creel club station and not at the new Dr. Knox Middle School. Liel has already put in her time at the station by helping the club during the installation of their latest multiband Yagi last summer.

In addition, Liel's dad, Israel, holds the call sign VA7ISH. I gave him Liel's call sign. I understand also that Liel's mom will be taking her Amateur Radio exam sometime in the near future.

My next YL is from small town Saskatchewan and she sent me the following information.

Hi my name is Terry and I have been a ham since April 2012. My call sign is VE5TLC.

I grew up on a farm west of Herschel, Saskatchewan. Some of my favourite activities on the farm were: horseback riding; taking things apart to see how they work; and talking on the walkie-talkie with my brother.

I attended elementary school in Herschel and High School in Rosetown.

OUR YL PROFILE: TERRY CUTLER, VE5TLC

When I graduated from High School I moved to Saskatoon and worked at the Sherbrooke Community Centre for a year while I decided "what I wanted to be when I grew up".

I decided I wanted to be a Medical Laboratory Technologist (MLT) and I attended Kelsey Institute of Applied Arts and Sciences (now the Saskatchewan Institute of Applied Science and Technology) and St. Paul's Hospital and graduated as a Radiologic Technologist (now MLT).

I had a 31-year career as an MLT starting at St. Paul's Hospital for 19 years, in different positions in the lab, and transferred to City Hospital lab to take a Tech III position for 12 years until I retired, after a year of medical leave, in December of 2008.

I got into Amateur Radio because as my health improved I started looking for some learning challenges. A friend from the church choir mentioned that he was one of the instructors for an Amateur Radio class starting in January of 2012. I asked about the class and the first thing I knew I was enrolled and doing very well. It turns out my brain was ready to tackle Ohm's Law and learn about wave propagation, antennas and modulation. I passed the Basic exam with honours in April 2012. I am currently studying for my Advanced qualification and CW.

Now that I know who "Elmer" is, that friend of mine from the choir, Ron, VA5RJF, is certainly an Elmer. I am a member of the Saskatoon Amateur Radio Club, VE5AA, and I am the Treasurer of the club. I am also a part of the Educators group for the club. There are several members of that club that I could list as Elmer.

My first radio is a handheld, dual band radio on 2m and 70cm. I still get tongue tied when I talk on the radio; my mouth and my brain not quite in sync. I have participated in several community events in which the Radio Club was involved in the communication. I thoroughly enjoyed being part of the communication group for community events and look forward to participating in more events in the future. I appreciate the community of Hams around me and the hobby has given me another way to be in touch with a group of great people.

I live in Saskatoon in a condo in University Heights with Tia, my three-year old, mostly black, cat.

My other interests are singing, knitting, computers, photography and playing the guitar.

I am an active volunteer at my church, in the Radio Club and on the Condo Association Board.

Maybe I'll meet you on the airwaves sometime in the future. – 73, Terry, VE5TLC

Thanks Terry that is a great story. I know you will do well on the Advanced exam and on the CW.

Well folks, that just about does it for me this time around. Hopefully, by the time you get to read this, the weather will have smartened up and it will actually be warm outside.

The Saskatchewan Amateur Radio League (SARL) will be hosting the 2014 Hamfest this year in Moose Jaw on July 5. I shall let you all know how it went in my next column.

YL's please get hold of me with your stories, and photos. I am running out of girls to interview and I have absolutely no idea who will be next. It could be you!

Make sure you check out the CLARA website at http://www.clarayl.ca when you get a minute or two. As you know the CLARA nets have finished for the summer so we will be looking forward to hearing you on the net come September.

We run our 20m net on Tuesday mornings (or afternoons) depending on your location at 1700 UTC at 14.120 MHz. The 40m net also runs on Tuesdays 1400 UTC in the winter (when all you folks change your clocks) and 1500 UTC in the summer on 7.055 MHz. The 80m East Net runs on Mondays at 2400 UTC in the winter and at 0100 UTC in the summer on 3.750 MHz. All CLARA nets run from September to May.

You do not have to be a CLARA member to join in the chatter. We welcome all YLs and OMs too if you wish to join in.

Thanks for taking the time to read my column and hope everyone has a great summer.

33, 73, 88 or whatever the case may be...
Val, VE5ACJ

A NEW HAM: DESIRE, FOCUS AND SUCCESS

Glenn Lindsey, VE7GRQ

The students in the 2014 Radio Amateur course run by the Westcoast Amateur Radio Association (WARA) anxiously waited for their Monday night class to begin. Last week's lesson dealt with resistors; but capacitors and inductors were on the learning agenda for tonight's class. The atmosphere was electric.

A cellphone rang, and a young woman (Heidi Propp) sitting at a front desk scrambled about in her purse searching for the squawking intruder. It was a call from a seasoned Radio Amateur asking Heidi whether she would like to learn about working local VHF, and perhaps some HF QRP. She was delighted to receive the call, but she was concerned. After all, she was blind. How would she do?

Heidi was born in Victoria in 1977, and lives in the municipality of Colwood, British Columbia. In September 2013, her good friend Larry Scharschmidt, VE7LWS, asked during a meeting of the Canadian Federation of the Blind whether anyone would like to become an Amateur Radio operator. "Yeah, me!" replied Heidi enthusiastically. As it turns out, Heidi is very interested in all sorts of technology, and Larry notes admiringly that Heidi "is very, very smart".

As a youngster, Heidi attended Belmont Secondary School in Colwood. She quickly learned that if she was going to get anywhere in this world, she was going to have to do it herself. When turned down for a computer programming program at a local community college – "they didn't believe blind people could program" – she taught herself the Python programming language. But what about becoming a Radio Amateur? What about learning how to operate a transceiver? And all those schematics: that just might be more difficult.

On the following Saturday morning, Henk van Dalen, VA7HV – the Amateur who had phoned her in class – picked her up in his small SUV and headed to his favourite DX spot, the Esquimalt Lagoon, right beside the Strait of Juan de Fuca on the Pacific Ocean. Once parked, he asked Heidi to get out of the vehicle – it was raining at the time – for her first lesson. Although blind from birth, Heidi is a real hands-on woman. She listened attentively as Henk explained his antenna setup – a homebrew tapped-coil vertical. He had her touch the coil, the taps and the whip. She "got the picture" very quickly.

Heidi and her classmates. At left: Peter Cross, VA7PTR. At right: Andy Woodsworth, VE7VAW.

Back in the SUV, Henk immediately put a Yaesu microphone in Heidi's hand, time for more hands-on. This particular Saturday, the WARA students were practising VHF QSOs – their first opportunities to learn firsthand about simplex and repeater operation. And Heidi was excited. She was learning the skills of a Radio Amateur. Henk comments that Heidi's ability "to listen is her biggest asset, and ironically, Amateur Radio is mostly about listening".

In the WARA classes, Heidi is a "learning sponge". Andy Woodsworth, VE7VAW, the head instructor, notes that Heidi is "remarkable in her confidence and has a nice way of speaking… she is one of the brightest in the class". In order to help Heidi with schematics and graphics, Glenn Lindsey, VE7GRQ, draws "pictures" on the back of her hand. When resistors, capacitors, chokes and other hardware are passed around the class, she explores them closely with her hands.

One of the areas of radio work which attracts Heidi is emergency radio: "I would like to help out during emergency situations, to help other people in need." Cities and municipalities throughout southern Vancouver Island (and all of BC) have radio rooms, and Heidi will be welcomed in one of them very soon as a competent Amateur Radio operator.

Back at the lagoon, there's another lesson happening: hands-on QRP HF. Heidi learns how to use the antenna tuner before it's time to go DXing. Using a Henk's reliable Yaesu FT-817, it's not long before they find a nice strong signal on 20 metres from an American Amateur in Texas; but will he hear their atmospheric-cracking 5 watts?

"AF5OT this is VA7HV". AF5OT comes back with an astonished "5 by 9". Heidi makes her first QRP contact under the capable tutelage of VA7HV.

She dreams of setting up her own shack; and with transceivers like the Kenwood TMV71A and the TS590, and assistive technology like the Kenwood Voice and Record board (VGS1), she can live her dream.

On June 2, 2014, Heidi became a brand new Canadian Radio Amateur (VA7DDL) – and a very capable one.

Heidi Propp, VA7DDL and Brian Mury, VE7NGR

AMATEUR RADIO SATELLITES

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TIME TO TRY?

Up to now, I've been sharing information about the mainstays of our Amateur Radio satellite fleet and how you can receive their signals or, if properly licensed, actually work through those that have transponders.

In this installment, I'll discuss a number of other Amateur satellites that have launched in the last few years and then bring you up-to-date on some of the latest happenings in the Amateur satellite world.

But first, if you are one of those folks who have "always wanted to get into satellites", but never had the time (nor the inclination) to learn what it's all about, now is your chance to give it a try.

FOR BEGINNERS

Since I first began writing magazine articles in the spring of 2010 – for *Monitoring Times* (MT) magazine and later for *The AMSAT Journal* and here in TCA – I've received numerous requests (mostly from readers who picked up their first copies of these magazines in the middle of the series) for basic information on how to get started on the Amateur Radio satellites.

Portions of this article previously appeared as "A Flock of Other Amateur Radio Satellites" in the August 2012 edition of Monitoring Times Magazine. Thank you MT!

Fortunately, Bob Grove, the (then) publisher of *Monitoring Times,* was most gracious to allow all of his authors to republish their work in other media after it first ran in his magazine. I took full advantage of that offer and have since re-published most of my "getting started" information in both the Radio Amateur Satellite Corporation's (AMSAT) *Journal* and also here in a long-running series in TCA.

BUT WAIT... THERE'S MORE!

As one of AMSAT's many Web contributors, I recently uploaded the first nine of those "getting started" articles from the *AMSAT Journal* to the AMSAT website. And they are now all *freely available* for you to download (in pdf format) at: http://ww2.amsat.org/?page_id=1869

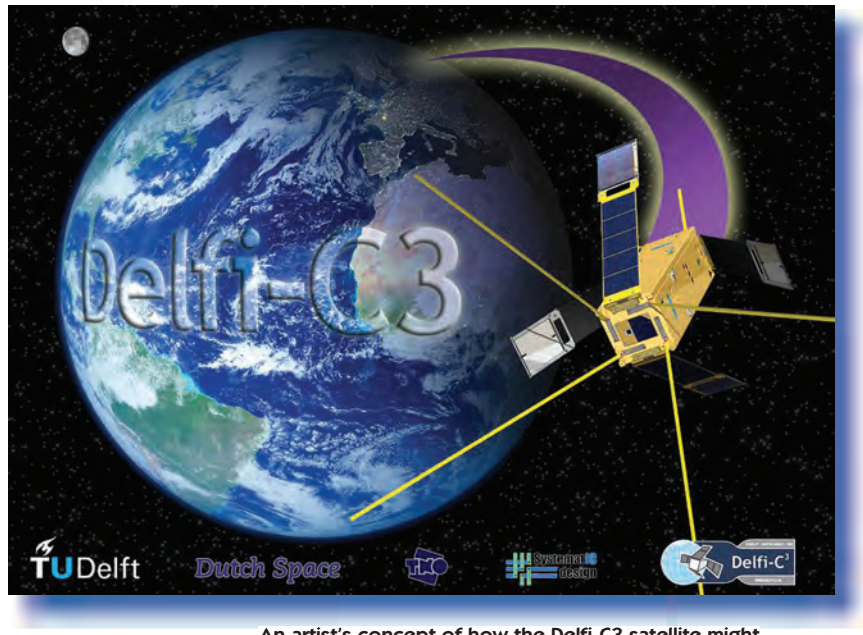
So, if you're just now joining us (or are a bit "rusty" on the "how to's") or simply interested in listening for our ever-expanding fleet of Amateur Radio satellites, this series of articles will be a good place for you to start your learning.

AN AGING FLEET

In my work as the Past President and current Treasurer of AMSAT-North America, I'm also frequently asked: "With all the on-orbit failures of AMSAT's satellites lately, what satellites are left for me to work?"

As I noted in my last column, clearly, we've lost one of our most popular so-called "EZ-sats" to battery failure (AO-51).

Others, like the AMSAT-China's Hope OSCAR 68 (HO-68) which showed great promise soon after launch, are now in beacon mode (if that) most of the time.



An artist's concept of how the Delfi-C3 satellite might appear in orbit. (Courtesy: Delft University)

In addition, satellites like AO-7 (which is now nearing it's *40th anniversary* in orbit!) is only functional while in sunlight and VO-52's Indian ground handlers had to switch the satellite to one of its backup analog transponders as the primary transponder experienced an on-orbit failure. Even the Mode V/U (Mode J) transponder aboard JAMSAT's venerable Fuji OSCAR 29 (FO-29) needs to be periodically turned off by ground controllers for many months because its orbit often progresses into long periods of darkness.

Despite *all* of these so-called "failures", the good news is that there's still a number of fully functioning Amateur Radio satellites available to listen to (or work through) most of the time. Satellites like AO-27 and SO-50 now carry the bulk of FM satellite traffic and FO-29's analog transponder has now come back to life as strong as ever.

What's more, there's an emerging class of satellites now in orbit – one even has a linear transponder aboard – that are still fun to listen to even if you can't (or aren't yet licensed) to work through them. Most are in a satellite class we call "CubeSats".

SELECTED FREQUENCY AND MODE DATA

Satellite	Uplink (MHz)	Downlink (MHz)	Mode
DO-64 (Delfi-C3)		145.870	CW Telemetry Beacon
Fastrac-1 (FO-69)	145.980 145.825	437.435	9600 and 1200 Baud AX.25 Packet
Fastrac-2 (FO-70)	435.025 437.435	145. 825	9600 and 1200 Baud AX.25 Packet
AubieSat-1 (AO-71)		437.475	1200 Baud AX.25 CW Beacon (20 WPM)

THE CUBESATS

In my May-June 2014 TCA column, I briefly described AMSAT's entry (called "Fox") into this whole new class of satellites. These satellites are based on a standardized design that now appears poised to become the future of the Amateur Satellite Service. Measuring only four inches on a side, these tiny satellites (sometimes also called "nanosatellites") are now being built, launched and/or controlled by numerous organizations (primarily educational institutions) around the world in ever increasing numbers.

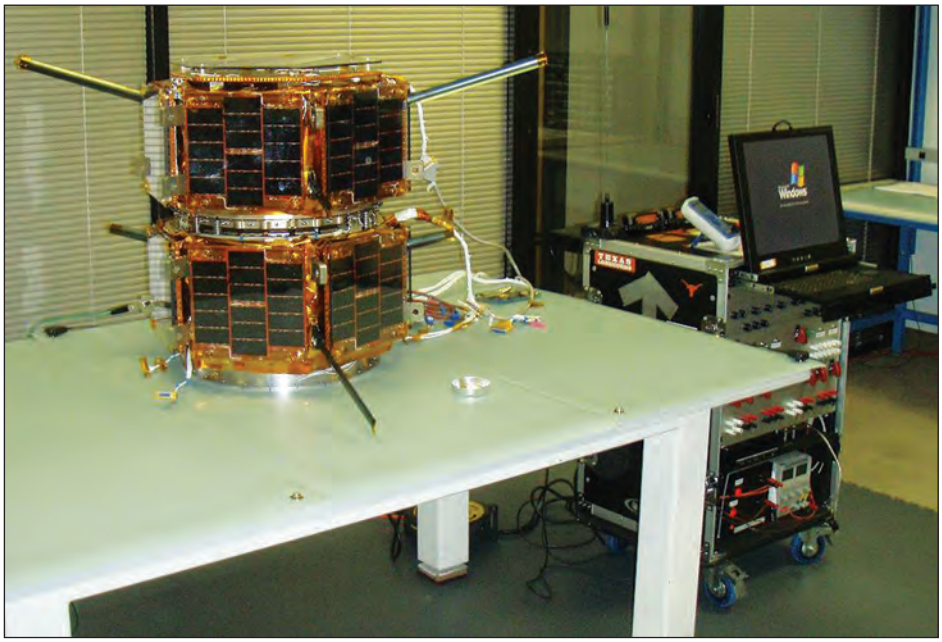
Some of these organizations have links to Amateur Radio, but many do not. The bulk of these satellites have digital downlinks. A few take pictures. But most are placed in orbit for the express purpose of conducting various scientific experiments. And while some of these experiments are of interest to Amateur Radio operators, most are not. Unfortunately, when their original scientific experiments are complete, many of them die on orbit or revert back to beacon mode – if they even last *that* long.

But despite their shortcomings, CubeSats are the future of this part of the hobby. They are reasonably inexpensive to build and still quite affordable (about $100K and sometimes less) to launch. However, they are not without their own, built-in design and operational problems.

For example, because these satellites are so small, they tend to run (as we say) "cold" on orbit. That's because they cannot absorb enough heat when in daylight to keep their internal parts warm enough to function properly in the bitter cold (upwards of -250 degrees Celsius) darkness of space when not exposed to sunlight.

In particular – and as anyone who has tried to operate a digital camera with rechargeable batteries outdoors in our cold, Canadian winters knows – rechargeable batteries don't operate for very long and will not accept a full charge if their internal temperature falls below freezing. This issue is further complicated by the fact that the cross-sectional area of these satellites does not allow for large enough solar panels to generate enough extra onboard power that could be used for internal heating. As a result, these satellites often run in a negative power mode that eventually "does them in", sometimes soon after launch.

But, as I've said, even though most of these satellites do not contain transponders, they are still fun to listen for. So, let's shine the spotlight on a few of these CubeSats that were still operational at press time (early May, 2014). Unfortunately, some (or all) of these satellites could very well be partially (or completely!) defunct by the time you read this so "your mileage may vary".



Fastrac 1 and 2 undergoing final electronic testing prior to launch (Courtesy: University of Texas at Austin)

DO-64 (DELFI-C3)

Delfi-C3 is the first nanosatellite built as a student project from the Delft University of Technology in the Netherlands. The satellite is based on the CubeSat concept in a "3U" design: three single (so-called "1U") CubeSat frames stacked on top of one another. A number of novel technologies are being tested onboard the satellite including a thin film solar cell experiment and an autonomous wireless sun sensor experiment.

Delfi-C-3 was successfully launched on April 28, 2008 at 0354 UTC on a PSLV launch vehicle from the Satish Dhawan Space Centre in India. As of this writing, Delfi-3C was still operational with a telemetry (Science) beacon downlink centred on 145.870 MHz. However, its linear uplink and downlink analog transponders, although activated soon after launch, were not operational.

The latest status of the satellite can be found on the Delfi-C3 website at: http://www.delfic3.nl

FO-69 AND FO-70 (FASTRAC-1 AND 2)

Fastrac-1 and 2 are a pair of student-built nanosatellites from the University of Texas at Austin, USA. They were built to investigate relative navigation, attitude determination with GPS, and a micro-discharge plasma thruster. After their primary science missions are completed (and assuming they survive that long!) one or both satellites may be opened for general Amateur Radio use as digipeaters using 1200 and 9600 Baud.

Fastrac-1 and 2 were successfully launched by a Minotaur launch vehicle from the Kodiak Launch Complex in Alaska on November 20, 2010 into a 650 kilometre circular orbit. At press time, the digital transponders aboard FO-69 and FO-70 were not operating, but their 2m and 70 cm beacons were being transmitted. Check out Gunter's Space Page at space.skyrocket.de/doc_sdat/fastrac-1.htm for more information about this interesting satellite mission.

(AO-70) (AUBIESAT-1)

AubieSat-1 (AS-1) is an undergraduate-built CubeSat satellite developed by Auburn University in Alabama, USA. It was successfully launched into a somewhat elliptical 816 X 458 kilometre Orbit from Vandenberg AFB, California on October 28, 2011.

AubieSat-1 transmits with a power of about 800 milliwatts on a downlink frequency of 437.475 MHz. The beacon signal, along with telemetry, is sent using continuous wave (CW) Morse code at 20 words per minute. More information on the status of AO-70 can be found at: http://www.space.auburn.edu

These are just a few of the current "flock" of small satellites that are now in orbit and available for you to hear.

There are many more satellites that have been launched recently than I have room to list here. An excellent chronological outline of all of our Amateur satellites (listed by launch date along with their current operational status) can always be found on the AMSAT website at http://www.amsat.org. Click on the "Satellite Info" tab.

PROJECT FOX UPDATE

Also in my last TCA column, I introduced you to AMSAT-North America's next big project, a CubeSat design we call "Fox". I also reported that AMSAT's first CubeSat project (Fox-1) had been selected by NASA for one of their reduced cost ElaNa launches (Educational Launch of Nanosatellites program) in the 2013-2014 time frame.

From the start, Fox-1 has been viewed by AMSAT as a "proof-of-concept", rapid-prototype effort designed to be a simple, on-orbit replacement for AO-51.

Early in 2014, Fox-1's RF team completed the final schematic design review of the RF transmitter card. While that review took only a couple of hours, it represented the completion of many months of design, prototyping and test work.

The transmitter power amplifier is now showing greater than 450 mW at the minimum battery voltage of 3.3 Volts and around three-quarters of a Watt at the maximum battery voltage of 4.2 Volts. While this output may appear miniscule by HF standards, it is more than enough to present a solid downlink signal on the ground from Low Earth orbit. Keep in mind that AO-51 routinely operated with an output power of only half a watt, and SO-50 produces a workable downlink signal while operating with even less power than that.

Tests on Fox-1's circuit prototypes indicate that the total RF card will draw less than one watt at the maximum battery voltage and considerably less at lower voltages. When idle (i.e., not keyed) the transmitter should draw less than 30 mW. Obtaining these results from such small components is a marvellous piece of engineering and will (hopefully) give Fox-1 an easily workable downlink signal from orbit using relatively small antennas on the ground.

Late in 2013, the team received more good news from the International Amateur Radio Union (IARU) Frequency Coordinator (Hans van de Groenendaal, ZS6AKV). Hans has now coordinated Fox-1's operating frequencies. Its uplink will be on 435.180 MHz FM, and its downlink will be on 145.980 MHz FM

In other Fox-1 construction news, Mark Kanawati, N4TPY, of AMSAT's Fox-1 partner SpaceQuest (http://www.spacequest.com) reviewed and approved AMSAT's design for the satellite's solar panels. SpaceQuest is doing the installation of the solar cells on the satellite's printed solar panels that also contain the solar panel circuitry. Each of these solar panels will accommodate two Boeing/Spectrolab solar cells. There is a hole in the Z-Axis (bottom) solar panel to accommodate the lens of the camera module that is being built by students at Virginia Tech University.

In spite of all of this is very good Fox news, in January, AMSAT's (then) Vice-President for Engineering, Tony Monteiro, AA2TX, had to resign his leadership post on the Fox-1 team due to his rapidly failing health. Since the project's inception, Tony had been the "spark plug" that energized his teammates to keep the myriad of details of the Fox project firmly on track. Sadly, Tony became a Silent Key in late March 2014.

Since that time, AMSAT's experimenters, under the expert leadership of AMSAT's new Vice-President for Engineering Jerry Buxton, N0JY, have been busy further honing the spacecraft's mechanical and electronic designs as well as building flight hardware. AMSAT's experimenters have also been working closely with NASA on a detailed collaborative agreement for the launch of the satellite.

As I noted in previous columns, AMSAT's Fox-1 project timeline was initially based on an anticipated launch for the satellite in the second half of 2013. However, as with most satellite launches, that date has now slipped by. Fox-1 now needs to be finally "buttoned up" and shipped to NASA this October to be prepared for flight on any number of subsequent launches in early to mid-2015.

Needless to say, the launch timeline for Fox-1 could once again slip – or be accelerated – depending on NASA's other ElaNa launch schedule. In the interim, the latest on Fox-1's construction and launch status can always be found online at: http://ww2.amsat.org/?page_id=1113

LOOKING AHEAD

That's' all for this time. Clearly, it's a very exciting time for Amateur Radio in space. In future columns, I'll bring you up-to-date on the progress of the Fox-1 effort as well as the status of some of our other Amateur satellites still in orbit. I'll also highlight some exciting Amateur satellite projects that are now on AMSAT's drawing boards. See you then!

TCA

FEEDBACK: OUR READERS WRITE

SX

Finally time allows me to read TCA two issues back. Having visited Hall's Beach, etc at one time or another,

I agree with Dirk Moraal, VY1NM, that the mosquitoes in the Arctic and High Arctic can carry away a ham with QRP equipment. I also support SX (DX within a large nation).

Dirk does very well with three watts SSB from the Yukon! I would support a TCA award for miles-per-watt or equivalent, and suggest another award for the poor sod who must read the QRP message in the presence of many QRO signals. Good ears are important for QRP QSOs. My 1 Watt and 5 Watt CW signals seem to get out regularly to good listeners in Virginia, Vancouver, Kingston, etc. They deserve our respect and recognition.

Please advise Dirk to keep generating those great ideas.

Charles Hooker, VE3CQH
East Garafraxa, Ontario

"Preserving our History"

Gord Hogarth, VE3CNA, has assembled a collection of information regarding older, mostly defunct, Canadian Amateur Radio organizations. This is an attempt to archive this data before it is forever lost.

The website is called "Long Delayed Echoes" and it is hosted, courtesy of the Scarborough Amateur Radio Club, VE3WE, at:
http://onradiohistory.ve3we.org/

My involvement with the project is mainly in relation to the Canadian Amateur Radio Operators Association (CAROA) and its journal, XTAL magazine. Both were in existence (as far as we know) from 1935 until late 1950.

I have amassed every copy of XTAL, XTAL Jr (a wartime bulletin), and related correspondence that I have come across in the last 30 years. This material has been scanned and is available for viewing at the LDE website. Click on the CARAO tab under "Pages". It would really be appreciated if TCA readers who have any additional information or copies of XTAL or XTAL Jr could get in touch with me at ve3fit@rac.ca. I can copy this material and have it included in the project, with credit.

One other national publication which is archived on the site is Skywire. Gord is looking for additional material here as well. Thanks to all who can help to preserve our VE heritage.

Ken Grant, VE3FIT – Scarborough, Ontario

MY TRIP TO ENGLAND: A "RADIO" HOLIDAY

Ralph Webb, VE7OM

It is a pleasure for an Amateur to sit by his radio and have conversations with stations near and far. Many of us, though, don't get the opportunity to go to some of the many places we talk to. I recently had the opportunity to do just that. While I love to be able to travel with friends and family to share the experience, this time, it was going to be a "radio" holiday. By that I mean, I would take a small QRP radio, some antenna parts from my Buddipole and be in a place that I had worked from home. I had always wanted to visit the western counties of England, Cornwall and Devon so I thought I would take advantage of the CEPT permit and operate from there.

I decided that, although I would like to spend many days there, I would restrict myself to the far west county of Cornwall, and then only on the Penzance area. I thought that I could activate some of the Summits on the Air (SOTA) peaks that would be in the area, but decided in the end that since transport would be a bit of a problem I would just operate from parks, beaches and other areas that I could easily get to by bus or by foot.

My first consideration when thinking of equipment was weight. I considered and discounted many configurations and pieces of equipment for a simple mast from the Buddipole, the centre "tee" and wires to form an inverted vee for 40, 30 and 20 metres.

I also took one of the coils, collapsible whip, and two extension arms to make into a vertical with some of the wire as a counterpoise. I had to remember that all this had to go into my travel bags and be carried around by me if I wanted to move it anywhere. The radio itself also had to be small so I used my Elecraft KX1 and a 13.5 Volt lithium-ion battery pack that would provide full power (4 Watts) on the radio.

With my bags packed and repacked, in early September I boarded the flight in Vancouver to London (LHR) and anticipated a great holiday as the weather reports from the UK suggested great (mid-20s) temperatures.

Our flight was on time and we arrived under cloudless skies and hot temperatures.

I thought I was going to have a great time enjoying sunshine and radio! Well it was for about 36 hours and then the weather changed and we lost about 10°C overnight and we had wind and rain. Oh well, I was going up to Birmingham to visit friends and perhaps it would be good the next week. I was also looking forward to nicer weather in the Cornwall area which, I was led to believe, could be somewhat "sub-tropical".

Operating at the Marconi field site. I'm sitting on one of the antenna mast guy anchors used by Marconi.

In any case, the next week proved to be not much better, but I found a park near my hotel in the Paddington area – Kensington Park, as it turned out – and I was able to take the radio and antenna there to try it out. I was happy to notice, that even in the middle of the "big city" the radio noise was quite low and I was able to make a number of contacts from there on 40 metres. I used the QRP frequency of 7.030 to call CQ and had a German and a local English station return my calls. Great start!

The following day I made my way across the city to the Victoria Coach Station and took National Express to Penzance – an all-day journey that went through some interesting places not the least of which was Plymouth, Truro and some other smaller villages along the way. Since the weather was "iffy" when I got there, I had to make decisions based upon what I could see from the window of the room in which I was staying.

On that first morning, although blowing, it was relatively dry so I decided that I'd take the bus down to the Marconi transmitting site at Poldhu. This is the place where, in 1901, Marconi transmitted the "S" that was heard at Signal Hill by St. John's, Newfoundland.

There is not much there to mark this great achievement, although the local radio club has an operating Amateur station (GB2GM) and Interpretive Centre there, but it was not open when I arrived. I pushed open the gate and walked on the edge of the bluff along the Cornwall Foot Path over to a marker which indicated that from this place Marconi had his radio transmitting apparatus that sent the signal across the Atlantic. The placement of the field is such that it gives an unobstructed shot directly west, the direction he wanted to send his signals.

Walking around the field I passed over the ruins of the original transmitting "shack" and numerous antenna mounts and guy wire anchors. I set up my antenna, an inverted vee on 20 metres, and put my little radio on the air from that historic field.

I was able to make a number of contacts in continental Europe and when mentioning my QTH as "Poldhu", got some interesting comments, some of which connected that name with Marconi! As I mentioned, the day was windy, but dry so I didn't stay long. However, I did enjoy the company of many dog walkers who wandered by and stopped to chat.

Poldhu Cove

I visited the Interpretive Centre on my way out and mentioned that I had set up and operated from “across the field”. They hadn’t noticed; in any case, my small signal would not have bothered them much as they used large yagis on tall towers.

The return journey took me back through some interesting places that I would have loved spending time, but since I couldn’t “do it all”, I settled on continuing on to St. Ives on the Bristol Channel side of the peninsula. I can always remember my Dad joshing about the nonsense rhyme – “as I was going to St. Ives” – and now I was indeed “going to St. Ives”. This small seaside town is famous for its arts and crafts and has a Tait Gallery there which displays some intriguing pieces of artwork. The town itself is a veritable photograph, very picturesque and comfortable.

The following day, I took the bus to Marizion, the village opposite St. Micheal’s Mount. This time not only was it windy, it was also rainy and cold. The rain was pelting down, but I persevered and set up the Buddipole in the vertical configuration on the beach looking toward the Mount. (What we do in the name of our hobby!) I was able to make two contacts on the east coast of the USA from there, very exciting. The contacts were more of the “handshake” variety, but I was able to give my QTH and QRP power level.

As the tide was ebbing, by late morning, I was able to take the walkway from Marizion to the Mount itself. I walked around the little settlement at the base of the hill, but did not walk up to the castle itself. I had originally wanted to operate from there, but any green space was on the private grounds and since I didn’t have permission to operate from there, I thought it best to leave well enough alone.

Having enough of the wet and the wind, I took the bus back to Penzance and was refreshed by a warm shower and change of clothes. The following day, dawning a bit brighter, I thought I would walk the three miles or so from Penzance to Mousehole (pronounced Mouz’l). I started out walking through Penzance, along the seawall, past the Centennial Pool and towards the village of Newlyn. By then, the weather had turned a bit nasty and the rain was coming in showers. I persisted and got to Mousehole, but was somewhat soaked. I had taken a plastic poncho for days like this, but of course it was back in my room! In any case, I walked to the harbour area and set up the vertical again on one of the arms of the breakwater.

The marker, by the Cornwall Coast Path that marks the Marconi site, says that just a few yards to the east is the field where Marconi set up his transmitting equipment and antennas that succeeded in sending the signal that was heard in Signal Hill, Newfoundland in December 1901.

Even though it was raining and I was crouched under my umbrella, I was able to work four stations in continental Europe before being just too cold and wet to continue. Thankfully, the conditions were good so I didn’t have to spend a lot of time outside. Before making the long walk back to Penzance and a hot shower, I stopped in for a cup of tea and a Cornish pasty at one of the many tea shops in the town.

My last day in Cornwall dawned bright and clear for a change! I wandered down to nearby Penlee Park and set up the radio and antenna again, this time using the inverted vee configuration. I was pleased to be able to spend most of the morning enjoying radio in the sunshine like I had hoped the preceding days would have been spent! I tried 30 metres as I had not used that band during my trip and I had taken the time to measure the antenna lengths for that band before I left. I had been told that it was a very good band “over there” so I wanted to give it a try. Although the band wasn’t “hot”, it did allow me to make a few contacts in Europe, which I was pleased to do. I had a number of people out for a walk in the sunshine, stop by and chat. Many were interested in the setup and were curious to see what could be done with minimum equipment. Some commented that the little radio looked like something out of the spy movies. I indicated that indeed it could have operated well under those situations!

It was time to pack up and get ready for the bus trip back to London. I enjoyed my stay in Cornwall and thought that the places I visited were all that I had hoped for and more. I met some very interesting people, shared a few pints in the pubs, and ate some interesting food while there.

My final few days in England were warm and sunny. I decided on the Saturday to play tourist a bit so I walked across Kensington Park, past the Albert Memorial, through the Royal Albert Hall and down to the Victoria and Albert Museum. I had always been fascinated by that place and now I had the chance to visit there. Lots of original sculptures, both ancient and new! I could have spent a long time there, but realized that I couldn’t “do it all”. It would take many hours and many trips there to even touch a part of it.

Later in the afternoon, with the sun shining, but threatening clouds, I took my equipment to Kensington Park and set up beside the “Long Water”, just below the water fountains. I was in a shelter, but the antenna was out in the long grass. This would be the last time I would operate here so i hoped for a few final good QSOs. I managed to talk to a number of European stations and had an interesting conversation with an English Amateur who ran a radio business – and from what I understand he was an Elecraft distributor and was using his newly acquired KX3 on this occasion.

In two days, I would be returning home so I had to pack up the gear for the last time. I truly enjoyed operating from the various places in the United Kingdom and I’d love to do it again. By making the two dozen or so contacts under what I would describe as somewhat “simple” conditions, I feel that should my skills be called upon in some emergency or “less than perfect” conditions, I’m sure that I’d make a good showing.

I’m sure that I will have the opportunity to travel again in the future and I’ll keep looking for ways to include Amateur Radio in them. I’ll continue trying out new antenna configurations and operating techniques. Truly, working from a field with rudimentary equipment hones the skills and sharpens the mind.

Ralph Webb, VE7OM, is the former “Club Corner” columnist for TCA.

QUA – A TOPICAL DIGEST

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472 KHZ BAND

Gradually, this band is coming into use. You will have seen elsewhere, Canada's approach to it.

It has now been authorized in Poland with a one-watt EIRP limit and QSOs were made in February with the Czech Republic and Germany.

In addition, Bulgaria has allocated 472 to 479 and access to the 60m band and extended Top Band to 2 MHz. (Info from *RadCom*).

ICOM 50 YEARS OLD

ICOM is celebrating its 50th anniversary this year. Tokuzo Inoue, who started the company in 1954, is still active in its operation. It is now a publicly held corporation and traded on the Japanese stock exchanges.

IRC PROBLEMS

N7DD brought up this all-too-often recurring problem:

"Recently I have been receiving QSL requests that include an IRC.

Many have not been stamped by the issuing post office. My local post master says that he cannot accept them without a seal."

W4TV responded:

"Not true. The box says (in French):

Empreinte de controle du pays d'origine (facultative)

In English that is:

Postmark of the country of origin *(optional)*

The originating country (postal service) may stamp or not stamp as they choose; it should not make any difference as to their validity. Many countries prefer to postmark IRCs as an internal control but it is not required by UPU (Universal Postal Union)."

And after W3LPL quoted the UPU instructions, W4TV continued:

"Frank's quote is section 381.3(a) of the Supplemental Services section of the International Mail Manual. Anyone having problems with a clerk should suggest the clerk refer to the IMM to confirm and/or request the clerk consult a Supervisor or the local Postmaster.

Unfortunately, section 381.3(c) of online version of the IMM has not been updated to reflect the current IRC now bears an expiration date of 2017-12-31 and the 2013-12-13 coupons should be returned to their country of origin."

Although IRCs are not seen often these days, sometimes one will come in from a Short Wave listener and difficulty in redeeming it presents the Amateur with an ethical dilemma.

LY5W had an interesting solution. He said:

"I can buy all your IRCs for 1.25 each. Via Paypal. Valid until 2017."

SLOPPY MORSE

There was quite a lot of reaction to the item on SOS, CQD and barred prosigns in general.

I remember being struck by the way novices often send CQ as a barred pair and we are so used to CQ that we often don't notice they are missing the space. Maybe there is something especially recognizable in the letter Q and that may be the reason for choosing it for CQ, RQ, ARQ etc – and it may be something special about the click-click click-click clikclik click-click sequence of the Q in landline telegraph American Code).

A few years ago we had a discussion in FOC (First Class CW Operators' Club) about whether "break" should be sent as "BK" or as "BK barred" (in Amateur practice of Break-in operation). The ARRL manual shows it as unbarred. This may be a case in which so many Amateurs sent it unbarred that it became the rule.

There is a motto in journalism: "Where there is a conflict between the truth and the legend, go with the legend." It is frustrating to be right when everyone believes you to be wrong.

AMATEUR RADIO AND FLIGHT MH370

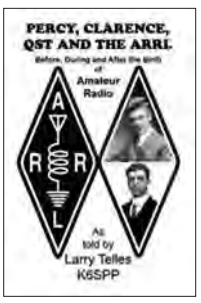
The following item by Jim Linton, VK3PC, Chairman IARU Region 3 Disaster Communications Committee appeared in a recent issue of "Contact", the newsletter of the North Shore ARC in North Vancouver, under the heading "Missing flight search involves Amateur Radio EmComm":

"The vanishing of the Malaysian Airline (MAS) Boeing 777-200ER jetliner with 239 passengers on board is a mystery that nine nations are trying to solve. When flight MH370, ex-Kuala Lumpur bound for Beijing, disappeared from the air traffic control radar, the MAS Emergency Management Centre (EMC) at Kuala Lumpur Airport provided accommodation for all next-of-kin at the Everly Hotel at Putrajaya.

The Malaysian Amateur Radio Transmitters Society President, Mohd Aris Bernawi, 9M2IR, said MARTS was asked to provide a link between the airport and the hotel. Mohd, 9M2IR, said at the hotel MARTS quickly set up a station, led by Zanirul Akhmal Zanirun, 9M2PRO, and Azizi Samsuri, 9W2ZZE, was the MAS team leader. NESRAC, a club from Negeri Sembilan, provided the volunteers for the station at the airport's Emergency Management Centre.

MARTS provided a crossband VHF/UHF link to avoid any unnecessary interference from the public services. An HF link was later added. During the callout there were 11 volunteers at EMC and 23 volunteers at the hotel, on a shift roster for the link. Mohd, 9M2IR, who oversaw the entire process, said MARTS (an International Amateur Radio Union member society) was pleased to be able provide the link on the very tragic occasion. The search for MH370 continues."

A BOOK BY K6SPP ABOUT AMATEUR RADIO HISTORY



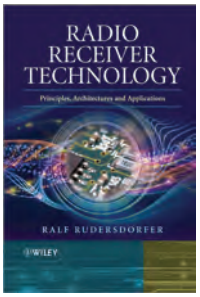
This item comes from K6TP:

"One of our Telephone Pioneer members Larry Telles, K6SPP, has written a great book about the growth of Amateur Radio and the ARRL.

The book covers the early technology and people responsible for pulling it all together leading up to the birth of Amateur Radio and the League in 1914. It is a handy reference and an easy read.

It provides a chronological history of the various events affecting Amateur Radio from 1938 to the present day. The title is *Percy, Clarence, QST and the ARRL* and it has numerous source notes for each chapter. You can order it through Amazon.com."

RADIO RECEIVER TECHNOLOGY BOOK



Written by Ralf Rudersdorfer, OE3RAA, and published by Wiley. At first I wondered whether this was a useful book for Radio Amateurs, but I should not have worried.

Some of it is fully comprehensible to only the technically skilled Amateur, but there is also much that is essentially practical, especially the coverage of receiver testing and measurement, and the problems involved in measuring.

Written in German and translated into eminently clear English, basic system concepts are outlined, with a little history from the very beginning of radio. The emphasis is on semiconductors and digital radio (the author was born when low-signal vacuum tubes were already obsolescent), with many examples of a variety of specialized applications in air, sea, land and Amateur service.

Of special interest to Amateurs is the discussion from practical experience of the evaluation of receiver characteristics under various propagation and noise conditions. We make good use of fast and slow AGC (Automatic Gain Control), and there is in this text a very thorough explanation of the factors governing not just the design, but the educated use of AGC.

This is not a construction manual. Digital radio construction, Amateur or commercial, is essentially the assembly of a collection of modules anyway.

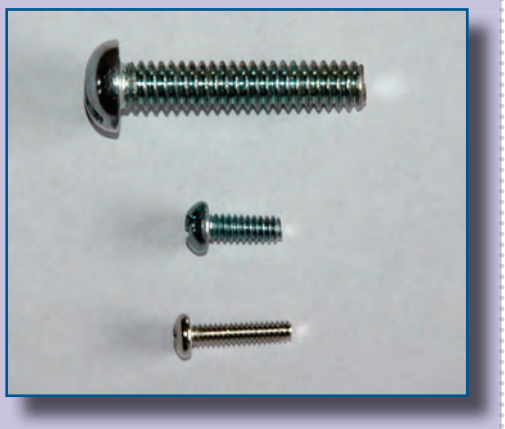
Amateurs engaged in professional design may well find "Radio Receiver Technology; Principles, Architectures and Applications" a must. (ISBN 978-1-118-50320-1). It is available also as an eBook (ISBN 978-1-118-64784-4).

There is a very comprehensive index, 1200 or so entries, making the book an excellent source for quick reference. There are also extensive references and lists for "further reading".

TCA

FEEDBACK: OUR READERS WRITE

MACHINE SCREWS?



In the process of assembling a project, I needed to mount a small transformer to an aluminium chassis. This step required four screws with lock washers and hexagonal nuts. As usual, Murphy's Law dictated that there were none to be found in my workshop. A trip to the local hardware store was in order.

Arriving at my local hardware store, a feeling of doom began to descend.

A young clerk approached me and asked, "May I help you?"

"Yes, I need some machine screws, 6-32." I replied.

There was a pause. The cloud of doom thickened, "Oh! You mean 3/16-inch bolts!"

That particular hardware store is no longer in business. It has therefore occurred to me that a simple explanation of the meaning of what machine screw designations are, might be helpful to other project builders (and hardware store clerks).

So what is a machine screw? My simple description is "It is a screw with a uniform thread and is intended to be screwed into a threaded hole. Therefore, it does not have a tapered thread or pointed end (e.g., wood screw)." The screw heads come in a wide variety of configurations (see the photo for some typical examples.

What does "6-32" mean? The first number, in this example "6", refers to the screw diameter size.

The larger the number the bigger the diameter.

The table on the right gives some of the basic screw diameters.

SCREW SIZE	DIAMETER
2	0.086 inches
4	0.122 inches
6	0.138 inches
8	0.164 inches

More detailed information may be found in readily available tables on the Internet and in various technical books. The diameter of a numbered screw may be calculated by using the equation, D=60+(13*N). "D" is the diameter in thousandths of an inch and "N" is the screw size. By rearranging the equation you can obtain the screw size number, N=(D-60)/13.

Above a number 12 screw, the fractional dimension is used. For example 1/4-inch or 3/16-inch.

The second number, "32", refers to the threads or turns per inch. In other words, you need to turn the screw 32 times to move it one inch. Typical sizes that you may encounter are 2-56, 4-40, 6-32 and 1/4-20. When purchasing these screws you will also need to know the length and which head that you want on the screw (for example, Robertson, Phillips, round head, flat head etc.).

Metric sizes are easier. A designation "M3x0.5" tells us that the screw is 3mm in diameter and the threads have a pitch of 0.5mm. Each turn will move the screw 0.5mm. Note that the thread designations are different in the two systems, ANSI and metric.

I hope that the above information has helped to clarify those mysterious numbers.

Jan Larendowicz, VE3GIZ – Pickering, Ontario

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FRESH ON THE AIR

– ADVENTURES FOR THE NEW AND BEGINNING HAM

Choosing Your First Radio

New Amateur operators spend a great deal of time studying and preparing for their exams. Almost all of you reading this column did so at one time. But what about the time and energy spent deciding what your first radio was or is going to be?

Are you still looking for a rig to get you on the air? If you are, let's take a look at how you should choose your first Amateur Radio rig. And if not, let's see if you made the right choice.

First, you should spend some time researching the local Amateurs and repeaters that are in your area. Most new Amateurs usually get on 2 metres and 70 centimetres since these bands are the most common across the country. Your first contact will probably be on the repeater of your local Amateur Radio club.

If you visit your local club's website, you can find out who the members are, get an idea of how the club operates and what benefits it has for its members. You may also find out the club's repeater band and operating frequencies and parameters.

Knowing what band the repeater is on will help you determine what type of rig you should get.

For example, if you intend to buy a single band radio, it would make no sense whatsoever to buy a two metre rig if the club's or another local repeater is on UHF. You need a radio on the right Amateur band to operate on the repeater.

A single band unit is usually cheaper than a dual-band or tri-band radio and it may be the perfect fit for your budget – especially if you intend to operate mostly around the repeater's geographic operational range. However, if you want to travel outside of your local area – such as to another city – or want to use a repeater on another band, or want to access several repeaters around you that are on various bands, you might want to consider a dual-band or multi-band radio as your first choice.

The advantage of a multi-band radio over a single band radio is the ability to operate on more than one band in one compact radio. You could always buy two single band units, but that will cost you more and carrying two radios around is cumbersome. A multi-band unit is more expensive than a single band one, but for flexibility in operation, if you can afford it, I recommend getting at least a dual 2m/70cm radio. You really won't regret the decision, even though your area may only have one repeater on one of those bands. You can always talk simplex on the other. And of course, if you travel, you will be able to use repeaters in other towns and cities.

Your choice of buying a handheld, mobile or base unit depends on your actual preferred operating activities. If you know that you will only be using your radio at home and never anywhere else, you will only need to get a base unit. Since the radio will be permanently set up in your shack, you can make the area exactly to your liking and operating comfort.

But what if you want to operate only in your vehicle? Then a mobile unit is your best choice. You will have lots of output power to hit those repeaters on the highway as you drive by; and mobile operation lets you talk while you drive to and from work, going shopping, or just out for a nice Sunday adventure in the country or around town. And some mobile units can be easily removed from your vehicle and set up as a temporary base station. Now, if you intend to operate in a number of places – such as out for a walk or while riding your bicycle, or driving in your car at various times and to various places, or at home after work and on the weekends – you should seriously consider getting a handheld. Though limited to a maximum of 5 to 7 Watts output, handhelds are very versatile and let you talk almost anywhere at any time. With the addition of an external antenna and microphone, a handheld can quickly be converted into a mobile or base station radio. Lastly, since many repeaters can access other repeaters around the world via the Internet, you can talk to someone in a foreign country on the other side of the Earth with your handheld!

You may also want to consider a basic radio without all the bells and whistles of more costly equipment. If your main intention is to simply talk with other Amateur operators, then you certainly can do without extended receive, paging and calling features, flashlight, FM broadcast radio, and other similar extras. As long as your radio can transmit and receive on the bands you want to operate, has CTCSS encode/decode to open repeaters, and a DTMF keypad to access repeater functions if available, that's all you really need when first starting out.

Don't forget to shop around. You will find radios at your local Amateur Radio dealer, at their online stores, and elsewhere on the Internet. It doesn't hurt to check out different manufacturers and models to see what radio might be the right one for you. Don't make a snap decision. Make an informed decision. And don't forget about Hamfests (see page 63). With a careful eye and research knowledge to back you up, you just might find exactly what you are looking for at a price that will make you drool.

Once you've gotten some on-air experience and are comfortable with two-way radio use, you can eventually move up to a better radio with the bells, whistles and features that you want.

Transmission Tidbit:

Here is a quote I really like because it says it all. "When Everything Else Fails. Amateur Radio often times is our last line of defense... When you need Amateur Radio, you really need them."

The Hon. W. Craig Fugate – Administrator, US Department of Homeland Security, FEMA

I would love to hear from our new female and very young Amateurs on your first impressions of the hobby, both positive and negative.

Write me via the magazine; email me at phillipjboucher@gmail.com, or via my website. My book, "The Almost Complete Guide to Yaesu's VX-6R" is now available in PDF for $14.95. Visit http://www.phillipjboucher.com to order.

PUBLIC SERVICE / ARES

Field Day has come and gone and should have been a great weekend to give your "Grab and Go" kits a good workout. I hope you got your group together and actually used all of your equipment in the field, practised your setup, take down and operational procedures and had some fun at the same time.

Kudos to Alberta for getting things up and running and participating actively in the NTS Digital system. Honourary mention to Garry Naylor, VE6FGN, for all of his hard work in getting things started, organizing a cadre of hams that were willing to learn and participate in the project, setting up schedules and procedures, and working with Mike, VE7GN, to put Alberta back on the map as an active NTS section again.

Among the many topics covered this month are the: 1) RAC Simulated Emergency Test; 2) "Eastern Shocker" Exercise; 3) St. John Ambulance Marathon: A KWARC Public Service Event; 4) CanWarn Atlantic Net Report; and 5) Amateurs Support the West Vancouver Yacht Club Southern Straits of Georgia Race.

Hew Lines, VA7HU – RAC National Traffic System (NTS) Coordinator

"EASTERN SHOCKER" EXERCISE

Submitted by Michael Hickey, VE3IPC – Ontario East Section Manager

The following article is based on multiple group reports (before and after) regarding the Red Cross earthquake scenario exercise "Eastern Shocker" involving Amateur Radio Emergency Service (ARES) groups. These reports are from Group Coordinators for Renfrew County East (RCE)-ARES, Renfrew County West (RCW)-ARES, Ottawa ARES/EMRG reporting AEC, and the Almonte ARC, which is affiliated with the Lanark North Leeds (LNL)-ARES group. The exercise included activities in Pembroke, Carleton Place and Ottawa in Ontario.

Renfrew County West-ARES Group member John, VA3IOI, who is a Red Cross volunteer in the Pembroke office, alerted RCW-ARES Group Coordinator (GC/EC) about a Red Cross exercise that was being planned for Sunday, April 6. While exercise details were being kept secret, he was told that the Emergency Operations Centre (EOC) and community shelter would be in Carleton Place in Lanark County, Ontario.

The exercise would require that messages be passed amongst Pembroke, Carleton Place and Ottawa Red Cross offices.

The three locations meant that four ARES groups would be affected: RCW-ARES, RCE-ARES, LNL-ARES (Almonte ARC) and Ottawa ARES/EMRG.

Previous exercises had messages being passed between the Ottawa and Pembroke Red Cross offices using packet with Outpost. However, the Lanark group was using D-STAR with D-RATS and not Outpost.

While it might be possible for John and Debra, VE3IEH, GC (EC) for RCE-ARES to use the VE3STP packet node to relay messages to Pembroke and Ottawa, an alternative was also planned.

From left: John, VA3IOI, Bob VE3YX, Rick, VA3RWH and Richard, VA3BIX, at the Outpost training. Also present was Yvonne, VE3RYA. (Photo: GC Debra, VE3IEH)

ARES: AMATEUR RADIO EMERGENCY SERVICES

Tim, VA3PYC, was experimenting with providing a manual bridge between D-STAR and Outpost at his home station, which is well positioned to reach all three sites. This was a good opportunity for the groups to work together and see how the different systems can function together.

In preparation for the exercise, an Outpost training session was held in the Pembroke Red Cross office on March 26. Two complete portable stations were set up in the office and messages were passed amongst them and the installed station in the office.

Bob, VE3YX (RCW-ARES GC) led the training for Debra, VE3IEH (GC/EC RCE-ARES), John, VA3IOI, Rick VA3RWH and Richard, VA3BIX (AGC/AEC). Yvonne, VE3RYA, was along to assist with the training. John and Debra each took one of the portable stations to attempt their use during the exercise.

The RCE-ARES Group was already preparing for an ARES exercise scheduled to take place on April 6 in Lanark County. GC Debra, VE3IEH and member Rick, VA3RWH, travelled to the Pembroke Red Cross on March 26 to attend a crash course on packet radio and Outpost.

Facilitated by RCW GC Bob, VE3YX and assisted by Yvonne, VE3RYA, the day consisted of setting up two portable packet stations and becoming familiar with Outpost. These stations were to be used in the exercise to provide communications for an EOC as well as another as yet unspecified location. Details were not being announced in advance of the exercise. Red Cross volunteer John, VE3IOI, was assigned to operate one of the portable stations and Richard, VE3BIX, was responsible for the fixed packet station at the Red Cross office in Pembroke.

The RCE-ARES Group participated in the April 6 exercise that was held in Carleton Place between the Red Cross and ARES groups from Ottawa and up the valley and including members of the LNL-ARES group. Unfortunately, callout procedures were not consistent or were entirely absent. For example, the LNL-ARES group Almonte ARC was not called out until after 10 am on the Sunday and members of RCE-ARES group never received a callout in spite of being placed on standby on the evening of the April 5.

The VE3STP repeater was a major factor in the success of the exercise as it was used for both packet and voice. The members of LNL-ARES conducted a successful experiment using their D-STAR repeater.

Due to a planned interruption in power on April 6 for some work by hydro crews replacing poles, the equipment switched to the emergency backup battery system at approximately 1:30 pm. When power was restored, the STP voice repeater did not come back into service and it failed.

GC Debra and RCE-ARES member Rick, VA3RWH, made a hasty trip to the Mount St-Patrick repeater site to determine what had happened. The snow was still very deep and it took them 30 minutes to walk into the site. Upon access to the shack it was evident that the packet repeater had not failed and that it continued to function beautifully throughout the exercise. A remote diagnostic was performed by RCE-ARES RPT guru Sandy, VE3AAC and Debra and Rick were able to reboot the voice repeater successfully at about 4 pm.

Members of the three ARES groups (RCE, RCW and LNL) gathered together for breakfast in Cobden, Ontario on April 23. They were joined by John, VE3IOI (a Red Cross volunteer from the Pembroke office) who was involved in the exercise. Attendees who had not been participants in the exercise listened to a short debriefing discussion concerning what went right and what went wrong on that Sunday. Also discussed was the progress being made with regard to a D-STAR link being designed for VE3STP to be connected to the Almonte ARC system. The design of the linking system can be attributed to (RCE)-ARES and the Champlain Regional Repeater Association member Rob, VE3JA. We are awaiting a suitable frequency pair to be assigned before testing can begin.

RCW-ARES GROUP

The RCW-ARES Group part of the exercise was for Richard, VA3BIX, to operate the ARES station in the Pembroke Red Cross building. John, VA3IOI, set up a portable packet/voice station at the EOC in Carleton Place. The joint operation with RCW-ARES using packet with Outpost and LNL-ARES (Almonte ARC) with D-STAR and D-RATS led to interesting and valuable lessons. Tim, VA3PYC, near Carp provided a valuable and efficient bridge between the two systems.

OTTAWA ARES/EMRG GROUP

The Ottawa ARES/EMRG Group also participated in the “Eastern Shocker” exercise, but it was not designed to have a large ARES component so there was little for EMRG / Ottawa ARES to do in it. Nevertheless, Tim, VA3PYC, Peter, VE3BQP, Mike, VE3FFK and Richard, VE3UNW, were able to assist somewhat. Even with this little amount of participation, a few “holes” in the notification procedure were found.

THE REGIONAL RED CROSS

This was a Red Cross initiated exercise and they asked that ARES be involved and for John Potter, VE3IOI, to serve as the liaison between the Red Cross and ARES. This exercise partly came about as a result of the Alberta flood experience of June 2013. In many flooded areas of Alberta, normal communications was either challenged or failed completely and ARES EmComm was the main communication channels available to the Emergency Operations Centres of at least two flooded cities, a few other humanitarian stations and the Provincial Operations Centre. For more information see the cover story in the September-October 2013 TCA.

This was the first such large Red Cross exercise in Eastern Ontario to include Amateur Radio EmComm stations set up from the Pembroke Red Cross to Ottawa Red Cross. The regional Red Cross wanted to know if a packet e-mail message could be sent from Pembroke all the way to the Ottawa Red Cross. It worked but with some exercise design planning shortfalls, which were noted afterwards. The voice and packet (three counties) radio path used consisted of fix stations at Pembroke Red Cross, the Mount St-Patrick VE3STP repeater for both voice and packet relay to both impromptu EOC and the shelter radio stations in Carleton Place, then onto Ottawa Red Cross fix stations.

As a result the Regional Red Cross recognizes that they need to put in place a communications plan to contact and activate the ARES groups that will be needed in the affected areas of any future exercise or incident. The Red Cross is being more preparedness conscious and is now communicating this to municipal officials.

RAC SIMULATED EMERGENCY TEST

The RAC Simulated Emergency Test (SET) is set for Saturday, October 18.

This nationwide exercise is the chance to test your emergency operating skills and the readiness of your communications equipment and accessories in an emergency-like deployment.

RAC Field Organization Leaders at the Section and local levels, along with many other volunteers who are active in public service and emergency communications, are developing simulated emergency scenarios in consultation with served agencies.

To find out how you can step up and be a part of the local or Section-level activities, contact your Section Manager. You can find contact information for all RAC Section Managers on page 4 of any issue of *The Canadian Amateur*. Additional contact information may also be found on the RAC website.

The Amateur Radio Emergency Service (ARES) and the National Traffic System (NTS) and members of the RAC Field Organization will participate and practice emergency operation plans, nets and procedures.

The RAC Simulated Emergency Test is an ideal opportunity to demonstrate the capabilities of Amateur Radio. Community and public service agency officials will learn first-hand by taking a role in the SET and by providing an objective evaluation afterwards from their perspective. Have designated stations originate messages on behalf of served agencies. Test messages may be sent simulating requests for supplies. Simulated emergency messages (just like real emergency messages) should be signed by an authorized official.

Formulate your plans around a man-made or natural simulated disaster. Possible scenes could be; a flood, a serious fire, a severe ice storm, a missing person, a serious accident (automobile, bus, aircraft), a broken gas line or any other imaginable disaster. Elaborate on the situation by developing a scenario to be implemented during the SET.

In consideration of local and Section-wide schedules with agencies and many others, RAC Field Organization Leaders have the option of conducting their local or Section-wide SET on another weekend in the fall season. Check with your local RAC Field Organization leadership for the exact date in your particular area. Your help is needed and the RAC SET is a great way to get involved in emergency communications.

For more information on guidelines, preparing and reporting for a SET, forms for RAC Field Leaders are posted on the RAC website at:

http://www.rac.ca/en/rac/public-service/ares/simulated-emergency-test/

THE ST. JOHN AMBULANCE MARATHON: A KWARC PUBLIC SERVICE EVENT

Submitted by Larry Gorman, VE3LGN (CEC) KWARC ARES

Nineteen members of the Kitchener-Waterloo Amateur Radio Club arrived on station early on a sunny but cool Sunday morning, April 27, to assist with the safe running of the annual St. John Ambulance fundraising marathon.

Radio operators were spread out along the primarily rural route at their predesignated Water Stations to monitor progress and report health or traffic concerns. Each Water Station also had a volunteer service/cheering team to cater to runners needs. Over 375 runners, of all ages and abilities, were registered, from all across Southern Ontario. A lone runner visiting from Abu Dhabi was also reported.

The marathon start and finish was in Bechtel Park, Waterloo, where net control was provided with an inside base area. A portable antenna tower – provided by Ben, VE3ST – was set up just outside. Radio traffic was monitored by Gord, VE3EOS, with Larry, VE3LGN, as station manager.

The 20 kilometre route was an elongated, figure 8, with the short loop serving as the 10K alternative run. The short course had a delayed start so that runners from both courses would have close finishes. Our most distant outpost was on Highway 86 northwest of the historic Montrose covered bridge. The majority of the route was on paved Regional roads. In spite of a few major dips in the topography our VHF repeater VE3KSR provided very reliable coverage at all positions.

St. John Ambulance has an extensive array of radios for their professional needs, which were available for the marathon, but were inadequate to make contact with the volunteer groups at most of the checkpoints.

Our logistics expert was club President Nick, VA3NNW. Detailed route information, complete with estimated first and last runner times, and operational procedures made for a very smooth operation plan.

Amateur Radio traffic and progress reports were found to be extremely helpful to the organizers. Fortunately, there were no medical emergencies requiring use of the standby ambulance.

Our operators included three XYLs as well as James Davidson, VE3TPZ, from Stratford, RAC Section Traffic Manager for Ontario South.

Club radio operators, in order of placement included: Linda, VA3LWH, James, VE3TPZ, Sue, VA3SZY, Peter, VA3PTB, Rich, VE3DCC, Lorraine, VE3VCL, Dave, VE3PMT, Don, VE3ESE, Neil, VE3NJE, Fred, VE3MTS, Roger, VE3RKS, Ben, VE3ST, Tom, VE3DQX, Terry, VE3NSV, Rick, VE3ZUP, James, VE3JLC, Nick, VA3NNW, Gord, VE3EOS and Larry, VE3LGN

This is the KWARC's second annual public service involvement for this Marathon. Participating members have found it to be a very interesting experience as well as a fun way to help one of our regions important social services agencies.

Jim, VE3JLC (NSMAil 2)

Monitoring Team @ Watering Station NSMail 4

Gord, VE3EOS and Larry, VE3LGN, at the Base Station (NSMail 3)

CANWARN ATLANTIC NET REPORT

On Monday, March 24, Bob Robichaud, VE1MBR, from Environment Canada sent an email asking to have CANWARN Atlantic activated for a spring blizzard approaching the Maritimes. The storm would bring snow for most regions, rain along the coast, very high winds and a storm surge. An email was sent out immediately to other Net Controllers and all spotters informing them of the net.

The storm would cause problems all across the Maritimes including shutting down the Trans-Canada Highway between Moncton, New Brunswick and Truro, Nova Scotia – a total of 170 kilometres. The Confederation Bridge that links Prince Edward Island with the mainland was closed along with the causeway that links Cape Breton and mainland Nova Scotia. Multiple power outages in each province put thousands in the dark.

The largest snowfall amount recorded from Environment Canada was 54 centimetres in Charlottetown, Prince Edward Island while the highest gust of wind came from Grand Etang, Nova Scotia: 172 kilometres.

At 10 am AT Wednesday, Mike Johnson, VE1MWJ and Randy Elliott, VE1ADV, started the pre net by linking up 12 repeaters from Nova Scotia and Prince Edward Island and IRLP Reflector 9014. They asked stations taking part to check in and then proceeded with giving the information Environment Canada would require and the order of giving it. After a short Q&A session the repeaters were brought down and everyone prepared for the first reports at 11 am.

For the next 12 hours reports came in from all over Nova Scotia, Prince Edward Island and parts of New Brunswick via VHF and Echolink.

There were 29 CANWARN stations taking part during the event and by the time the net ended at 11 pm AT a total of 205 reports had been sent to Environment Canada in Dartmouth, Nova Scotia.

The next morning CANWARN repeaters were brought up at 9 am AT for a recap of the event, final reports of snow totals and damage reports which were then sent on to Environment Canada. Thanks goes out to the Nova Scotia Amateur Radio Association (NSARA) owners and technicians of the repeaters for without them these nets would not be possible.

Thanks also to everyone who volunteered their time and participated for those 12 hours including Randy Elliott, VE1ADV and Mike Johnson, VE1MWJ (Net Controllers for VHF), Bob Tuttle, VE1DR (for bringing up the links each hour) and Emil Pineau, VE1ESP and Alfred RonDelet, VE1AAZ (Net Controllers for Echolink).

Special thanks to all the spotters who participated for without them these nets would not be possible. They are in no special order: Paul, VE1MPM, Brad, VE1ZX, Martin, VE1KLR, Mike, VE1XDT, David, VE1EDA, Ron, VY2HR, Scott, VE1CHL, Mason, VE1MUT, Eric, VE1JW, George, VY2GM, Paul, VE1DPG, Rick, VE9RWS, Barry, VE1DO, Bill, VY2LI, Dave, VE1DEH, Bob, VE1CZ, Joe, VE1JES, Derek, VE1WX, John, VE1JS, Doug, VE1DBM and Win, VY2WB. Thanks also to several non-members who supplied us with reports during the day.

Anyone interested in becoming a member of CANWARN here in the Maritimes please contact Bob Robichaud, VE1MBR at bob.robichaud@ec.gc.ca.

Adrian, VA7HRV, at the operating position.

Amateurs Support West Vancouver Yacht Club Southern Straits of Georgia Race

Submitted by Paul Giffin, VA7MPG (BC/Yukon Section Manager)

The Coquitlam Amateur Radio Emergency Services Society (CARESS) again provided communications for the West Vancouver Yacht Club Southern Straits of Georgia Race.

There are four different race courses covering over 120 nautical miles with a requirement for each of over 100 boats to report their rounding of course marks and receive a confirmation number for their report.

Communication can be difficult due to a 60 nautical mile range from the control station to the furthest limit of the course. We mounted a remote transceiver with an antenna height of 300 feet to provide the necessary coverage.

All operation was on the marine VHF band and CARESS had arranged a course and exam to qualify our Amateur operators with a marine VHF operators certificate.

The race takes place over two days of the Easter weekend, a time at which storms have occurred in the past causing loss of masts, rudders and even crew washed overboard.

Our operators interfaced with the Victoria Coast Guard and Marine Traffic management to coordinate Notice to Mariners about race traffic in areas of heavy commercial shipping and to provide assistance in any emergency traffic.

Fortunately, this year the only requirement for assistance was provided for a boat which had run aground and lost its rudder.

We would also like to thank: the University of British Columbia's Amateur Radio society for their assistance with equipment and the provision of a location; and the Internet Radio Linking Project for donating some equipment.

Those providing this round the clock service were:

Paul, VE7TL, Ian, VE7HHS, Dave, VE7LTD, Gordon, VE7OW, Paul, VA7JHW, Carlos, VA7CFK, Adrian, VA7HRV, Martin, VA7HYD, Geoff, VE7KA and Alsid, VA7ADP.

Bob Nash, VE3KZ
5260 14th Sideroad, RR6
Milton, ON L9T 2Y1
Tel. 905-878-7382
Email: ve3kz@rac.ca

THE SPORTS PAGE
— THE CANADIAN CONTEST SCENE

SPORTS PAGE INFO:

The contest results provided in this column are courtesy of the Maritime Contest Club team:

Gary Bartlett, VE1RGB
Scott Nichols, VE1OP

For more contest information check out these sites:

http://www.hornucopia.com/contestcal/weeklycont.html

http://www.contesting.com

http://www.sk3bg.se/contest/

http://www.arrl.org/contests/calendar.html

http://www.arrl.org/contests/rate-sheet/about.html

http://www.cq-amateur-radio.com/awards.html

http://www.arrl.org/files/file/DXCC/2013%20DXCC%20Current_a.pdf

The "Contest Calendar" at the end of this column is presented as a guide only.

RAC and TCA do not necessarily endorse or support any of the contests or the accuracy of the information.

Bands: The 30, 17 and 12m bands are never used in any contest.

Jumping into Contesting with a QSO Party

Just back from the Field Day and you want to know how to get started in contesting? The major contests can be very intimidating. For the uninitiated it must seem like driving a bicycle on to a freeway! There are sideroads where rallies are held which are much better training for these grand prix events. For many contesters the rallies are the kind of contesting they enjoy the most! They are my personal favourite competitions, and quoting Yuri, VE3DZ, after the Florida QSO Party: "Didn't plan a full-time effort, but started and got carried away."

These are the QSO Parties. The Ontario and BC Parties are the most popular of such Canadian sponsored events. The RAC contests also have much the flavour of a QSO Party and are excellent places to learn contesting skills. Being in such proximity to the USA provides more than ample opportunity for practice. There are some 40 US QSO Parties each year, ranging from the California QSO Party – with approximately 60 Canadian entrants – to one like the Maryland-DC or Nebraska, with either only a few or no Canadian participation.

QSO Parties are usually sponsored by a local or regional club. Those within the specified area generally work each other plus anyone outside the area. The multipliers are the target area counties or equivalent plus outside states, provinces, countries, etc. for the target area people. Those outside this area only work those within the area and count only those multipliers.

Here are some steps for someone approaching this sport via the QSO Party entrance:

1) Choose the contest: What was the participation last year? Look up the Canadian Results in TCA. If they are not there, there may have been no Canadian entrants. Plus side: You enter, you can be the top Canadian! Minus side: there is very little activity heard way up here and it is boring! Look for the happy medium. Check the full results on the web. The TCA Contest Calendar is a good starting point (see page 57).

2) Choose mode and power: Mixed mode is the most prevalent but some have CW only and Phone only categories. Some have power categories and in addition have multipliers for lower power. Working QRP might be advantageous when working some of these.

Here are some benefits from this kind of contest:

1) Rates are usually slower than in the Biggies. You can often take the opportunity to hear the call and exchange several times before taking the plunge and calling. This can be particularly important when serial numbers or four-letter county abbreviations are involved! On CW, this repetition allows you to copy well above your normal copying speed and is excellent practice.

2) QSO Parties take place relatively close to home. Relatively low antennas with high vertical take-off angles can provide excellent results. Low power will put a reasonable signal where you want it. Just don't call at the same time as the guy with the kW. On CW don't call zero-beat!

Here are some operating tips:

1) Tune until you hear someone giving a county abbreviation then see if he is the caller or the "callee". If the latter, prepare to call but it might be prudent to let him work one more station so you will have his call, serial number and abbreviation down before you make the contact.

2) When you are beginning, calling CQ has little advantage. On CW, it can be very traumatic to be called by stations going a little too fast and know that you have to slow them down or have one shot at copying the exchange.

3) Tune the entire band where activity exists. Be methodical. Tune and identify, then tune again. If there is a pileup, note the frequency and all the details and come back in a few minutes. At some point you may start passing up some possible contacts and concentrate on finding new multipliers. You are then listening only for the county abbreviations.

4) When multipliers count separately on each band, try to catch someone asking for a QSY to another band. Follow along and try to follow in on the contact. When propagation is open on more than one band to the target area change bands frequently.

5) When working mixed mode, follow the suggested times for CW and Phone as mentioned in the rules.

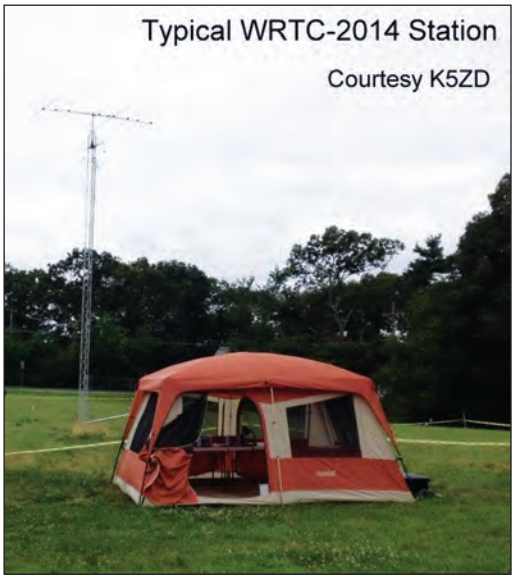
6) Watch for mobiles and rovers. Always note their frequencies and check them regularly to see if they have moved to a new multiplier. These are often in the rarest multipliers and sometimes present the only opportunity for a QSO with that county!

For more information, look on the web at http://www.hornucopia.com/contestcal/stateparties.html. This summer watch out for all three summer NA QSO Parties, MDC QSO Party, Kansas QSO Party, Hawaii QSO Party, Ohio QSO Party and Tennessee QSO Party. Have fun!

WORKING THE WRTC-2014 TEAMS

Awards will be available for stations that work the teams during the 2014 World Radiosport Team Championship (WRTC) competition. The "WRTC-2014 Chase" will run concurrently with the IARU HF Championship beginning on July 12 at 1200Z. The 59 WRTC-2014 stations will have distinctive call signs that will be easy to recognize. They will all be from the K1A to K1Z, N1A to N1Z and W1A to W1Z groups with the exceptions that no calls will end in J, Q or Y (too long), nor in E or H and not N1E (too short).

Andy Blank, N2NT, Director of the WRTC-2014 competition committee stressed the importance of off-site participants as part of the competition. "The WRTC teams will be using 100 Watts to simple antennas. High activity will make the competition more exciting and help identify the more skilled operating teams. In what other sport can you stay home and still be on the field of play?"


Typical WRTC-2014 Station

Courtesy K5ZD

Any station that appears in all 59 WRTC team logs will be able to download a certificate from the WRTC-2014 website after the contest.

Everyone who submits a log within six hours after the end of the contest will be given the title of "Assistant Judge of WRTC-2014".

All logs received will be entered into a drawing for one of 25 "WRTC-2014 Assistant Judge" hats.

Bronze, Silver and Gold awards will be available. Every station that submits a log containing confirmed contacts with the WRTC teams on 30 or more band/modes will be eligible for the Bronze level award. These logs will be entered into a drawing to win one of 10 WRTC-2014 bronze medals or one of 50 WRTC-2014 mouse pads.

A Silver medal will be awarded to the first five stations from each continent and W1 that have confirmed contacts with all 59 teams regardless of mode. Any other stations that work all 59 teams will be entered into a drawing to win one of 25 WRTC-2014 caps.

Gold medals recognize the highest level of achievement: contacting the WRTC teams on the most band/modes. With 59 teams, five bands and two modes, there are 590 possible band/modes available. Gold medals will be awarded to the top five band/mode leaders in each continent and W1. In the event of a tie, the order will be determined by the earliest completion time.

To earn any of the Bronze, Silver and Gold awards, participants will be required to submit their contest log within six hours after the end of the contest (by 1800z July 13, 2014).

Please check http://www.wrtc2014.org/participation-awards-for-wrtc2014-announced/ for more detailed information.

73, Bob, VE3KZ

TCA

DL-DX RTTY CONTEST

Call	QSO	DXCC	Area	Score	Class
VE6SQ	10	3	6	900,000	B
VA7ST	191	21	34	110,275	A
VE2FK	84	26	16	41,580	B
VE2NMB	84	17	22	34,710	D
VE2FXL	69	25	8	29,205	B
VE2EBK	76	15	18	27,390	D
VE3KAO	61	12	19	19,995	C
VE9BWK	47	16	11	14,310	B
VE3RCN	27	8	15	6,440	D
VA7AM	20	7	13	4,300	B
VE7IO	27	2	10	3,120	A
VE2QV	13	3	7	1,350	B

CQ WORLDWIDE VHF CONTEST

Call	QSO	Grid	Score	Class
VE7JH	327	79	30,099	M
VE7XF	305	79	24,095	6
VE3ZV	144	81	15,390	A
VA7FC	241	58	14,558	A
VE7DAY	216	51	11,220	A
VE3SMA	122	71	10,792	M
VE9AA	76	45	3,420	6
VE3EJ	63	40	2,840	A
VE3OIL	55	34	2,414	A
VA2LGQ	55	41	2,296	M
VA3WU	54	31	2,263	A
VE3RKS/R	40	33	2,145	R
VE3EG	43	34	1,904	M
VO1DJT	62	26	1,612	6
VE3JVG	44	25	1,525	A
VE4EAR	44	29	1,276	6
VE3IQZ	35	27	1,188	A
VE3CWU	43	26	1,118	6
VE3VZ	34	14	952	2
VE5UF	35	24	840	A
VA3PC	32	25	800	6
VA7ST	27	17	459	A
VA3MTT	15	12	180	A
VA3GKO	15	11	165	A
VA7DZ	18	9	162	A
VE2NGH	4	3	21	A
VE2KOT	4	4	16	Q
VE3EDX	3	3	9	Q
VE6BMX	2	2	4	A
VE1SKY	1	1	1	A
VE2PIJ	1	1	1	6

ARRL 10 GHz AND UP CONTEST

Call	Score	QSO	DFFNT QSO	Distance Points
VA3TO	4,900	31	15	3,400
VE3FHM	6,919	51	16	5,319
VE3FN	3,766	9	7	3,066
VE3EG	3,696	23	11	2,596
VE2PIJ	2,339	8	7	1,639
VE3NYZ	1,995	14	6	1,395
VE3KH	1,572	14	6	972
VE3RKS	463	6	4	63
VE3OIL	431	4	4	31

KANSAS QSO PARTY

Call	CW	DIG	PH	Mult	Score
VE5KS	151	7	76	90	56,440
VE7CV	149	0	79	89	53,945
VE6BMX	57	0	22	46	9,890
VE1RGB	59	0	0	45	7,965
VE9AA	50	0	16	37	6,834
VE3HED	0	0	48	27	2,692
VE7JH	6	0	27	21	1,612
VA3ATT	15	0	0	11	495
VE7RSV	0	0	16	13	416
VA3RKM	6	0	2	5	110
VE3JSO	0	0	6	5	60

IARU HF WORLD CHAMPIONSHIP

Call	QSO	Mult	Score	Power	Class
VE3AT	2,593	251	2,247,705	C	A
VE3UTT	1,650	209	1,250,238	C	D
VA3RAC	1,651	233	1,223,017	C	1
VE3XB	1,151	191	670,983	C	C
VE9ML	692	222	558,996	C	D
VE3DZ	994	174	552,972	B	C
VE3YAA	984	162	535,896	C	D
VE3BR	961	174	528,090	B	A
VE3RA	823	195	500,565	C	D
VE3CR	717	188	410,780	C	A
VE3CX	803	165	386,265	C	A
VE1RGB	797	148	382,580	B	C
VE9HF	706	112	284,256	C	A
VC6IARU	1,210	68	244,256	C	AC
VA7ST	647	111	217,671	C	C
VA7KO	613	103	191,889	C	C
VE3IAE	553	111	190,365	B	A
VE9AA	486	127	189,230	C	A
VE3OI	581	98	186,690	C	C
VA7DZ	531	102	171,666	C	D
VE3FH	450	119	155,414	B	C
VE4YU	504	99	150,480	B	A
VA2EN	459	92	140,300	C	D
VE7XF	395	102	124,134	C	C
VE2FK	370	110	124,080	C	C
VE1WOW (K1WO, op)	305	127	121,793	B	B
VE6BF	382	93	112,623	B	C
VE3TA	291	131	110,957	C	D
VE3OSZ	325	107	104,753	B	C
VE7IO	480	60	85,320	C	D
VA3EC	303	82	82,082	B	C
VA3ATT	328	81	78,732	B	C
VE3OM	204	110	71,060	B	C
VE7KW	320	71	68,018	C	D
VE3MGY	332	53	50,138	A	C
K2NV/VE3	242	75	49,500	B	C
VA6UK	221	70	46,830	C	B
VE5KS	197	67	40,803	B	C
VE3KAO	190	73	40,150	B	C
VO1MP	190	56	36,960	C	A
VE2QY	253	51	36,567	B	C
VE7JKZ	173	51	27,285	C	C
VE7DDG	149	56	26,040	B	A
VA3FN	141	56	22,008	B	C
VE4VT	137	51	21,675	C	A
VO1QU	163	42	21,546	B	C
VA3GD	125	61	21,533	B	B
VA3RKM	140	52	20,280	A	C
VE6AX	128	47	18,330	C	D
VE2KOT	136	45	17,370	A	C
VE3WDM	133	43	16,555	A	C
VA3PC	98	55	16,390	B	B
VE3FCT	96	56	15,792	B	B
VE3IGJ	136	41	15,580	A	C
VE2FXL	101	50	15,450	C	A
VA2MM	90	51	13,056	C	D
VE3RCN	101	48	12,816	B	A
VE2ER	131	32	12,000	B	B
VE3HEU	125	32	11,104	C	D
VE7NA	98	36	10,944	C	D
VE4EA	124	27	10,098	C	D
VE3VV	83	36	8,964	C	D
VE3XAT	93	31	8,215	C	D
VA2KKM	62	38	6,460	B	B
VE3FJ	61	33	6,039	B	C
VA3DBT	53	34	5,542	B	A
VA2GN	60	35	5,530	B	B
VA2SG	74	28	5,488	B	A
VA3VF	58	28	4,592	A	B
VE4SN	65	25	4,525	B	A
VE3JSO	54	25	4,050	B	A
VE3TL	38	30	3,480	C	B
VA7AQD	58	18	3,312	B	B
VE2HIT	44	30	3,120	B	B
VA2VJ	36	19	2,546	C	B
VE7NS	39	22	2,442	B	B
VE3PYJ	51	10	1,950	B	B
VE7RSV	30	18	1,908	B	B
VE7VAW	36	17	1,904	B	B
VE6LB	44	15	1,830	B	C
VA7AM	56	10	1,600	B	B
VE6SPS	42	13	1,560	B	B
VE7LSE	30	17	1,530	B	B
VA3RJ	30	18	1,332	B	C
VE2QV	28	11	924	B	C
VE4TCH	25	10	730	B	B
VE2KY	27	19	513	B	A
VA7MM	16	7	406	A	C
W6NF/VE4	28	5	340	A	C
VE9PLS	11	7	287	B	B
VE3VID	11	11	209	B	B

WAE DX CONTEST, CW

Call	QSO	Mult	Score	Class
VY2ZM	2,562	504	2,602,152	MO
VE3AT	1,975	424	1,679,040	SOHP
VE3DZ	940	317	596,911	SOHP
VE3TA	1 029	282	583,458	SOHP
VE3RZ	867	322	560,924	SOHP
VE9HF	698	378	524,286	SOHP
VE9AA	734	261	385,497	SOHP
VE5MX	692	192	268,032	SOHP
VA3AR	524	230	245,870	SOHP
VA7ST	607	186	227,850	SOHP
VE2FK	532	206	219,596	SOHP
VE3OSZ	406	256	210,176	SOLP
VA2WA	419	212	178,080	SOHP
VE3UTT	383	212	163,028	SOHP
VE3IAE	380	203	156,310	SOLP
VE3NZ	374	164	123,328	SOHP
VE1OP	388	142	109,908	SOHP
VE3CX	276	171	95,418	SOHP
VE7JH	372	124	89,776	SOLP
VA3EC	267	152	81,624	SOLP
VE3RSA	210	168	70,560	SOLP
VY2SS	255	132	67,848	SOHP
VE3TG	202	130	48,620	SOLP
VE7IO	161	113	37,516	SOHP
VE9OA	140	117	34,749	SOLP
VE4VT	136	119	33,558	SOHP
VE3EY	106	66	13,794	SOLP
VE3RCN	127	100	12,700	SOLP
VO1MP	131	86	11,266	SOHP
VO1QU	118	80	9,440	SOLP
VA7XB	112	80	8,960	SOLP
VO1BQ	95	89	8,455	SOLP
VA3FN	81	77	7,161	SOLP
VE9BWK	68	56	4,536	SOLP
VA3GUY	76	54	4,104	SOLP
VE2QV	41	46	3,726	SOLP
VE2KOT	56	58	3,248	SOLP
VA3RKM	41	59	3,009	SOLP
K2NV/VE3	32	32	2,080	SOLP
VE7BGP	41	50	2,050	SOLP
VA2FDT	22	26	832	SOLP
W6NF/VE4	15	24	360	SOLP

SARTG WW RTTY CONTEST

Call	QSO	Mult	Score	Category
VE5MX	418	126	656,460	SOAB
VE3NZ	372	129	613,395	SOAB
VE2AXO	326	112	478,800	SOABLP
VE3FH	268	125	421,875	SOABLP
VE3DZ	237	101	308,050	SOABLP
VE2EBK	193	93	225,060	SOABLP
VE2SG	97	57	67,545	SOAB
VE7IO	131	40	61,000	SOABLP
VE6AX	82	58	58,290	SOABLP
VA7ST	78	54	51,570	SOABLP
VE2HB	90	36	41,220	SO20M
VE2LX	66	40	34,600	SOAB
VE3EY	73	31	30,535	SO20M
VE2FK	93	25	25,375	SOAB
W6NF/VE4	85	25	20,250	SOABLP
VE7FCO	39	28	12,740	SOABLP
VE2KOT	20	18	4,320	SOABLP
VE3AJ	7	10	800	SOABLP

JULY NORTH AMERICAN QSO PARTY, RTTY

Call	QSO	Mult	Score	Class
VA7ST	327	111	36,297	SOAB
VE6BMX	251	99	24,849	SOAB
VE3JI	225	105	23,625	SOAB
VE3VID	243	94	22,842	SOAB
VE3IAE	230	81	18,630	SOAB
VE2FK	270	68	18,360	M2
VE7IO	221	70	15,470	M2
VE2EBK	190	79	15,010	SOAB
VE6AX	173	83	14,359	SOAB
VE3CX	168	76	12,768	SOAB
VE3TES	197	64	12,608	SOAB
VE9AA	106	60	6,360	SOAB
VA3PC	114	53	6,042	SOAB
VA3PC	114	53	6,042	SOAB
VE5KS	111	54	5,994	SOAB
VE3EY	127	47	5,969	SOAB
VE6QO	130	38	4,940	SOAB
VE3KAO	83	49	4,067	SOAB
VA3FN	76	47	3,572	SOAB
VA3FN	76	47	3,572	SOAB
VE3AJ	81	40	3,240	SOAB
VE3HG	72	41	2,952	SOAB
VE3MGY	85	33	2,805	SOAB
VE7FI	68	33	2,244	M2
VE3XD	50	32	1,600	SOAB
VE2FXL	53	30	1,590	SOAB
VE7CDC	12	10	120	SOAB

SCC RTTY CHAMPIONSHIP

Call	QSO	Mult	Score	Class
VE2FK	251	103	66,126	SOHP
VA2UP	166	90	38,160	SOHP
VE3FH	139	95	30,780	SOLP
VE5MX	157	75	27,975	SOHP
VA7ST	107	74	17,982	SOHP
VE2EBK	102	65	15,990	SOLP
W6NF/VE4	69	38	5,472	SO20M
VE3DZ	36	24	2,184	SO20M
VE7BGP	28	25	1,800	SO20M
VE2SG	29	23	1,495	SOHP
VE3AJ	21	19	912	SO40
VA3FN	6	6	78	SOLP

AUGUST NORTH AMERICAN QSO PARTY, SSB

Call	QSO	Mult	Score	Category
VE3CX	906	141	127,746	SO
VE3RZ	470	128	60,160	SO
VE1SKY	468	109	51,012	SO
VE6BMX	384	96	36,864	SO
VE5KS	325	91	29,575	SO
VE9OA	305	68	20,740	SO
VA7ST	216	75	16,200	SO
VE7CV	155	77	11,935	SO
VE8GER	189	60	11,340	SO
VE3TA	194	57	11,058	SO
VE4EA	165	57	9,405	SO
VE1PEW	158	55	8,690	SO
VE9HF	144	52	7,488	SO
VE3XB	98	61	5,978	SO
VE7JH	77	45	3,465	SO
VE9AA	70	40	2,800	SO
VE2EBK	97	27	2,619	SO
VE3KAR	47	32	1,504	M2
VE3AD	51	28	1,428	SO
VE3JSO	50	27	1,350	SO
VE6SPS	41	27	1,107	SO
VA3RKM	38	29	1,102	QRP
VE3FJ	47	19	893	SO
VA3PAW	33	25	825	SO
VE3EDX	25	19	475	QRP
VA7GAP	25	13	325	SO
VA3EEB	20	16	320	SO
VE3KJQ	21	12	252	QRP
VA3FN	15	9	135	SO
VA7HZ	0	0	0	SO

AUGUST NORTH AMERICAN QSO PARTY, CW

Call	QSO	Mult	Score	Class
VE3JM	1,056	212	223,872	SO
VE3EJ	926	230	212,980	SO
VE3XB	808	203	164,024	SO
VE3OI	730	182	132,860	SO
VE3DZ	708	176	124,608	SO
VE3KI	655	181	118,555	SO
VE3CX	553	162	89,586	SO
VA3ATT	468	145	67,860	SO
VE6BMX	504	131	66,024	SO
VA7ST	469	127	59,563	SO
VE3GFN	411	129	53,019	SO
VE3RCN	361	127	45,847	SO
VE3TA	296	128	37,888	M2
VE3NE	328	114	37,392	SO
VE5KS	288	128	36,864	SO
VE7IO	323	111	35,853	M2
VA3KAI	305	108	32,940	SO
VE3NZ	309	97	29,973	SO
VE3IAE	305	92	28,060	SO
VE9HF	252	99	24,948	SO
VE5UO	278	89	24,742	M2
VE3RZ	242	90	21,780	SO
VE7CV	198	91	18,018	SO
VE3OM	224	75	16,800	SO
VO1QU	284	54	15,336	SO
VE3HG	196	78	15,288	SO
VE7JH	225	66	14,850	SO
VE3KAO	168	86	14,448	SO
VA2FDT	165	72	11,880	SO
VE3UTT	172	59	10,148	SO
K2NV/VE3	142	57	8,094	SO
W6NF/VE4	157	50	7,850	SO
VA3FN	120	60	7,200	SO
VE3FJ	134	47	6,298	SO
VA3RKM	104	54	5,616	SO
VE2FK	92	47	4,324	M2
VE4EA	112	37	4,144	SO
VE7BGP	74	45	3,330	SO
VE9AA/VE1	65	38	2,470	SO
VO1MP	48	28	1,344	SO
VE9OA	40	28	1,120	SO
VE3RSA	35	24	840	SO
VA3RJ	30	18	540	SO
VE7IAD	26	19	494	SO
VE4DDO (VE7DS)	95	43	4,085	SO

RSGB IOTA CONTEST

Call	QSO	Mult	Score	IOTA
VA7ISL	991	140	1,074,500	NA036
VE9AA	366	78	158,496	
VE3IAE	249	68	109,004	
VE3UTT	141	71	103,092	
VE1RGB	164	67	93,398	
VE3TW	150	53	71,709	
VE9ML	106	60	70,440	
VE1OP	265	31	56,885	NA010
VA7ST	233	43	54,137	
VE3OM	68	53	54,060	
VE3IQ	68	50	47,100	
VE3FH	108	46	42,826	
VE6BMX	51	44	33,660	
VE3CX	86	40	33,400	
VA2WA	142	34	31,314	
VE2JCW	92	37	27,972	
VE3FJ	48	37	26,159	
VE4YU	54	32	20,928	
VE3EJ	119	28	20,132	
VE3TL	76	27	18,846	
VA3GD	50	24	13,632	
VE3VHB	29	29	12,615	
VE3HEU	43	20	7,440	
VA3EC	63	16	7,216	
VE9PLS	21	13	3,250	
VE3NEA	14	11	2,167	
VA3GUY	21	8	1,480	
VA2UTC	23	7	1,050	
VE2KOT	15	7	938	
VE7DB	36	3	630	NA091
VA3DBT	11	3	222	
VE7GM	1	0	0	NA091

CONTEST CALENDAR FOR JULY, AUGUST AND EARLY SEPTEMBER 2014

Contest Name	Start	End	Web Address
Canada Day Contest	0000z July 1	2359z July 1	http://www.rac.ca/service/infocont.htm
Venezuelan Independence Day	0000z July 5	2359z July 6	http://yv5rcv.org/concursosint.aspx
DL-DX RTTY Contest	1100z July 5	1059z July 6	http://drcg.de/index.php?lang=en
FISTS Summer Sprint CW	2000z July 11	2400z July 11	http://www.fists.org/operating.html#sprints
IARU HF World Championship	1200z July 12	1200z July 13	http://www.arrl.org/iaru-hf-championship
WRTC Championship	1200z July 12	1200z July 13	http://www.wrtc2014.org/
NAQCC Sprint	0130z July 17	0330z July 17	http://naqcc.info/
CQ WW VHF	1800z July 19	2100z July 20	http://www.cqww-vhf.com/
NA QSO Party RTTY	1800z July 19	0600z July 20	http://www.ncjweb.com/
RSGB IOTA Contest	1200z July 27	1200z July 28	http://www.rsgbcc.org/hf/rules/2013/riota.shtml
ARLHS Lighthouse/Lightship Weekend	0001z Aug 2	2400z Aug 3	http://arlhs.com/activations.html
TARA Grid Dip Digital Contest	0000z Aug 2	2400z Aug 2	http://www.n2ty.org/seasons/tara_grid_rules.html
10-10 Int. Summer SSB	0001z Aug 2	2400z Aug 3	http://www.ten-ten.org/
ARRL UHF Contest	1800z Aug 2	1800z Aug 3	http://www.arrl.org/august-uhf
NA QSO Party CW	1800z Aug 2	0600z Aug 3	http://www.ncjweb.com/
WAE DX Contest CW	0000z Aug 9	2359z Aug 10	http://www.darc.de/referate/dx/contest/waedc/en/
MDC QSO Party	1600z Aug 9	0400z Aug 10	http://mdcqsoparty.w3vpr.org/
MDC QSO Party	1600z Aug 11	2400z Aug 11	http://mdcqsoparty.w3vpr.org/
NAQCC Sprint	0130z Aug 13	0330z Aug 13	http://naqcc.info/
SARTG WW RTTY	0000z Aug 16	1600z Aug 17	http://www.sartg.com/contest/wwrules.htm
ARRL 10 GHz Cumulative	0600 Aug 16 *	2400 Aug 17 *	http://www.arrl.org/10-ghz-up
Russian Districts Contest	0800z Aug 16	0800z Aug 17	http://rdaward.org/indexeng.htm
NA QSO Party SSB	1800z Aug 16	0600z Aug 17	http://www.ncjweb.com/
Kansas QSO Party	1400z Aug 23	0200z Aug 24	http://www.ksqsoparty.org/rules/
Kansas QSO Party	1400z Aug 24	2000z Aug 24	http://www.ksqsoparty.org/rules/
Hawaii QSO Party	0400z Aug 23	0400z Aug 25	http://www.karc.net/
Ohio QSO Party	1600z Aug 23	0400z Aug 24	http://www.ohqp.org/adminRules.htm
SCC RTTY Championship	1200z Aug 30	1159z Aug 31	http://lea.hamradio.si/scc/rtty/rtty.htm
YO DX HF Contest	1200z Aug 30	1200z Aug 31	http://www.radioamator.ro/contest/
MI Labour Day QRP Sprint	2300z Sept 1	0300z Sept 2	http://www.qsl.net/miqrpclub/
Russian “Radio” RTTY WW Contest	0000z Sept 6	2400z Sept 7	http://www.qrz.ru/contest/detail/93
All Asia SSB Contest	0000z Sept 6	2400z Sept 7	http://www.jarl.or.jp/English/0-2.htm
Tennessee QSO Party	1800z Sept 7	0300z Sept 8	http://tnqsoparty.wordpress.com/
NA Sprint CW	0000z Sept 7	0400z Sept 7	http://www.ncjweb.com/

Note: In the above chart an * indicates Local Times

TARA GRID DIP SHINDIG

Call	QSO	Mult	Score	Mode
VE2FK	91	66	6,006	RTTY High
W6NF/VE4	40	33	1,320	RTTY Low
VE2NMB	25	23	575	RTTY Low
VE2KOT	14	14	196	RTTY Low
VE2NMB	5	5	25	PSK High

HAWAII QSO PARTY

Call	QSO	Mult	Score	Power
VE5KS	27	21	2,627	LP
VE7CV	33	26	2,280	LP
VE3NLS	23	17	1,081	HP
VE6BMX	21	16	912	HP
VE7JH	16	13	713	LP
VE1ZA	12	11	598	LP
VE9AA	13	12	380	HP
VE7RSV	13	10	224	LP
VE8GER	10	9	182	LP
VA3LUK	7	7	88	LP
VA3RKM	2	2	16	QRP

YO DX HF CONTEST

Call	QSO	Mult	Score	IOTA
VA3AR	309	112	136,528	SO-MB-CW-HP
VE9OA	121	66	29,370	SO-MB-MX-LP
VE2JR	80	41	12,751	SO-MB-MX-HP
VE9AA	39	28	4,648	SO-MB-CW-HP
VE3DZ	44	24	3,864	SO-MB-CW-LP
VE1OP	33	22	3,080	SO-SB-MX-14MHz
VE7JH	22	10	800	SO-SB-MX-14MHz
VE9PLS	12	10	520	SO-SB-MX-14MHz
VE2KOT	2	1	4	SO-SB-MX-14MHz

ARRL AUGUST UHF CONTEST

Call	Score	Category
VE3ZC	6,825	SOHP
VE7FYC	2,256	SOLP
VE3CRU/R	2,166	R
VE3NYZ/R	882	R

BRITISH COLUMBIA/YUKON:

SM Paul Giffin, VA7MPG
A/SM Ron McFadyen, VY1RM
A/SM Neil King, VA7DX
STM Al Ross, VE7WJ
SEC Fred Orsetti, VE7IO
SEC Terry Maher, VYIAK (Yukon)
OBM Bill Foster, VE7WWW
OOC: Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW
Website: www.va7mpg.ca

MARCH-APRIL SM REPORT:

Near the end of 2013, the Yasme Foundation announced their Yasme Excellence Award winners for 2013. Lee Sawkins, VE7CC, of Maple Ridge, BC was recognized for his software and filtering on DX cluster spotting. Lee is active in DX and contesting and has been selected as a team leader for the North American 12 region in WRTC-2014. Congratulations Lee and my apologies for not noting this award sooner. Good Luck in the WRTC-2014

Congratulations to Ann Makosinski, daughter of Arthur, VE7FAB and Sandra, VE7EEL, from Victoria for winning at the 2013 Google Science Fair. Ann won in her age group for creating a novel LED flashlight that requires no batteries or other power sources. Congratulations Ann.

The Coast Emergency Communications Association (CECA) members took part in a joint ground Search and Rescue, Civil Air Search and Rescue Association (CASARA) exercise in March. I was able to attend some of the planning meetings for this event and would like to congratulate all involved in the planning for an excellent job.

The scenario involved an aircraft with parachutists on board running into trouble. Without going into a long story the aircraft got into trouble, the parachutists bailed out, the plane crashed short of the airport and there was a fatality. Needless to say these events resulted in multiple search and command sites. To add reality CASARA took some airplane parts out into the bush. There had to be coordination between the various units and teams involved.

In the end everything reported missing was found. CECA communications teams were able to provide the requested communications and everyone took away valuable information from the exercise. Congratulations to all involved for an excellent exercise, a great learning environment and a good days work.

In April, the Coquitlam Amateur Radio Emergency Services Society provided communications for the West Vancouver Yacht Club Southern Straits Race. More information on this event can be found on page 52.

In late April, the Emergency Management of British Columbia Public Service Lifeline Awards were announced. Bill Foster, VE7WWW, from Kamloops won the Emergency Radio Communications Award for his outstanding contributions to the program. Bill is a longtime RAC member and currently serves as Bulletin Manager for our Section. In addition Jim Spencer, VA7SPJ, from Nanaimo won the PEP Air Award. Jim works closely with the RCAF and ground Search and Rescue teams as the Vancouver Island Search Coordinator and Air Deputy for PEP Air. Jim is also active in the Civil Air Search and Rescue Association and the Coastal Emergency Communications Association. Both these gentlemen were also honoured at a formal event on May 29 at the BC Legislature. Congratulations to both of you.

Neil King, VA7DX, of Vancouver and Steve Wright, VE7CT, of Langley took part in the Amsterdam Island Expedition last year. A book has now been published giving you some idea of what the expedition is all about. For more information please see the article on page 30 or go to the Section website at www.va7mpg.ca and look for the entry on April 28 – Amsterdam Island Expedition.

On April 27, the annual Vancouver Sun Run was held and Amateur Radio played an important role during the race. More on this event in the next issue, but a thank you to all those radio operators who participated and made the event fun and safe.

My RAC duties have kept me busy over the last while. Some of you may have noticed the new RAC website is starting to be rolled out; more will follow. In addition work continues with the Training Specification Group and the Section Managers Council. As this work continues look for more announcements from RAC HQ.

Public Service Honour Roll
March:
VE7WJ 100; VE7GN 260; VE7DWG 90; VE7WWW 151; VE7EEX 99; VA7MPG 111; and VE7XLH 105.
April:
VE7XLH: 110; VE7DWG: 90; VE7WWW: 143; VE7EEX: 88; VE7GN 170; VE7WJ 93; and VA7MPG 344.

Bulletins:
March 50
April 28

– 73, Paul, VA7MPG

ALBERTA:

SM: Garry Jacobs, VE6CIA
SEC: Neal Sunderland, VE6NL
STM: Jack Humphries, VE6JRH
OOs: Don Momen, VE6JY
Tom Martens, VE6TRM

MARCH-APRIL SM REPORT:

Ian, VA6EMS, reports that Fred Van Driel, VE6FVD, is Calgary Regional ARES newest AEC. We have identified a need for Volunteer Coordination and Fred is doing a great job already; it's a natural fit. Thanks Ian for continuing to expand your group.

Vince, VE6LK, reports that as a direct result of the articles written in TCA (http://www.fars.ca/activities/how-field-day-became-a-reality-the-story-of-the-high-river-flood-of-2013/), the City of North Vancouver EMO invited him to speak about our experiences and lessons learned and to do a Q&A with their team and the North Shore Amateur Radio Club.

Thanks for that Vince; a job well done. The presentation can be viewed at http://youtu.be/VbZoMrsqlnA. It is worth the 90 minutes of your time to take it in.

The VE6YXR repeater UHF linking system expansion is progressing. Jeff, VA6JL, has placed three UHF repeaters in the province that all link into the hub in Red Deer on 444.55 MHz for backup ARES use, if the main SARA system has a problem of any sort. They are Heatburg (south of Alix) 449.875 with 107.2 tone, Crossfield 448.750 with 107.2 tone and Sundance (north end of Pigeon Lake) 448.750 with 100 tone. The coverage is most of highway 2 from Calgary to Edmonton and east beyond Stettler at this time. Well done Jeff.

Reports are always welcomed from all ECs in the province.

– Garry Jacobs, VE6CIA

MANITOBA:

SM: Jan Schippers, VE4JS
STM: Jan Schippers, VE4JS
SEC: Vacant
DECs: Jeff Dovyak, VE4MBQ (Capital Region and CanWarn); Gord Snarr, VE4GLS (South-East Central Region / South-West Region); Wayne Warren, VE4WR (North Region and Special Projects); Vacant (North-Eastern Region); Vacant (North-West Region); EC Ron Wlliscroft, VE4QE (Selkirk and District); Bill Boskwick VE4BOZ for RM of Grey, RM of Dufferin & Town of Carman

MARCH-APRIL SM REPORT:

Spring is a busy time but thanks to Mother Nature, there were no floods or other disasters to contend with. The WARC Spring Fleamarket was held on April 13 at the Heritage Victoria Community Club. The event was well attended and everyone enjoyed themselves.

Great Job, Vera!
David Rosner, VE4DAR

After several months spent organizing and shepherding her instructors and students through Basic Short Course 7, Vera Koladubsky, VA4VMM, can now relax and take pride in their accomplishments. Eighteen students started the course. Of the 15 students who wrote the Basic Exam, 13 passed with 8 getting the Basic with Honours level. We all thank Vera and Gary Goodman VA4RWT, their instructors and Adam Romanchuk, VE4SN, for doing such a great job. We look forward to hearing the new grads on the air.

Winnipeg ARES
Jeff Dovyak, VE4MBQ
A/SEC Manitoba ARES

Fifteen Winnipeg ARES members and associates provided volunteer Amateur Radio communications support for the Scouts Canada Klondike Derby at Camp Amisk o March 1 and 2. One of the reasons that we participate in things like Klondike Derby is to practise disciplined communications during all weather conditions; the brutal cold on Saturday, March 1 certainly made sure of our volunteers getting that opportunity!

Thanks to our volunteer operators, VE4s: MAQ, GWN, CIB, CLK, TRO, MWH, HAZ, STL, CHT, CLK, DXR, TTH, KEH, CDM; and VA4AJG. Special thanks to Bob Poole, VE4MAQ, for picking up the ARES Boler from EMSB and to Harm Hazeu, VE4HAZ, for returning the Boler to EMSB.

Winnipeg ARES participated in the joint City of Winnipeg, CN Rail, and Winnipeg Regional Health Authority Exercise *Tri-Par* on Wednesday, March 5. This was an enhanced tabletop style exercise with no actual deployments but a number of notional deployments based on various injects from the Exercise Control staff.

The overall scenario was a derailment of rail cars carrying Dangerous Goods onto the roadway, automobile traffic colliding with the rail cars and a plume of toxic gas being released.

A combination of WebEOC and paper-based record-keeping forms were utilized. As usual taking a vacation day from work to participate in this exercise was most useful.

The following Winnipeg ARES members assisted me with impromptu role play: VE4s: DAR, HK, PEH, AJO, JNF, HQ, GWB and YYL.

Speaking of taking vacation days for ARES activities, Glen, VE4GWN and I both took vacation time to attend the 2014 Disaster Management Conference from March 12-14 at Canad Inns Polo Park. Not only did we get to network with Disaster Management professionals, take in the various lectures and workshops, but we were both able to make some inroads with several firms in terms of assistance for the next Winnipeg ARES Silent Auction. Thanks to the Disaster Management Conference Committee for facilitating two ARES registrations.

Eighteen Winnipeg ARES members indicated that they would be prepared to get involved in a possible communications support operation for City of Winnipeg Community Care Centres that were under consideration from March 12-14. Ultimately, the City decided to establish one Citizen Resource Centre on March 15 with two more opening later on – our support was not required. Thanks to the 18 ARES members who came forward right away to say that they'd help if we were actually tasked. VE4s: VD, MWH, JHJ, CHT, GKS, SIG, DJS, PH, PEH, HK, STS, JDH, KAZ, SE, JNF, MBQ; and VA4s: MAC and RWT.

Thanks to Garry Frankel, VE4VD, a former Paramedic and a Sudden Cardiac Arrest survivor, for providing Adult CPR/AED training to 12 Winnipeg ARES members on March 18. Participants included VA4MAC and VE4s: SIG, JS, GWN, YYL, SE, XYL, GKS, DJS, HK, CHT and DLA.

Garry Frankel, VE4VD and David Latour, VE4DLA, completed the Winnipeg Emergency Management (WEM) Course in mid-March – 70% of Winnipeg ARES members have completed this course.

Five members of the ARES VE4EMO Team attended the Manitoba Emergency Coordination Centre (MECC) on Sunday, March 30 for a WebEOC Refresher Session hosted by EMO Projects Officer Heather Sorko. WebEOC is the disaster management software used to track all situational awareness information, status reports and task requests entering, exiting and being used at the MECC. Participants were VE4s: BN, KEH, DWG, SIG and MBQ.

March turned out to be all about preparedness from our exercise at Klondike Derby, participation in tabletop *Tri-Par*, CPR/AED training, CANWARN Spotter Training and the WebEOC refresher for our VE4EMO Team.

On behalf of the Winnipeg ARES Executive and members, I would like to thank the sponsors who contributed generously to making our Silent Auction at the WARC Fleamarket very successful. Thanks to Donors: Darcy Wilson, VE4DDW, Gerald Sherman, VE4GKS, Susan Collings, VE4SYM, Ruth Mills, VE4XYL, Glen Napady, VE4GWN, Roswitha Napady, VE4YYL, David Rosner, VE4DAR, Richard Kazuk, VE4KAZ, Manitoba Hydro (Janet Rak & Richard Hollands), City of Winnipeg Emergency Preparedness Program (Randy Hull), Manitoba Disaster Management Conference (Randy Hull), Manitoba Marathon (Shirley Lumb), RCAF 17 Wing / RCAF Run, Canad Inns Destination Centre HSC (Chrissy Bohemier)

While we couldn't run a Silent Auction without sponsors donating items, we also couldn't run a Silent Auction without someone obtaining and organizing the donations and getting the lots set up – thanks to Craig Martin, VE4CDM, for Coordinating that operation and to some dedicated volunteers staffing the Winnipeg ARES Table: Craig, VE4CDM, Susan Collings, VE4SYM, Garry Goodman, VA4RWT and Glen Napady, VE4GWN.

Tiffiny Taylor from CoCoRaHS made a presentation about CoCoRaHS at our April General Meeting. She signed up several ARES members on the spot to be CoCoRaHS weather observers and also answered questions for a number of existing CoCoRaHS observers. Thanks to Manitoba Council of Scouts Canada for providing Winnipeg ARES Inc. with a recent honorarium.

2014 CANWARN Spotter Training
Jeff Dovyak, VE4MBQ
A/SEC Manitoba ARES

Over 30 people participated in 2014 CANWARN Spotter Training in Morris Manitoba on Saturday, March 22. South-Central ARES DEC Gord Snarr, VE4GLS, was able to arrange for use of the private dining room at a local restaurant. After a self-paid group lunch, we got on with the four and a half hour training session led by Environment Canada Warning Preparedness Meteorologist Natalie Hasell, VE4NAT.

Spotters from five out of nine CANWARN districts participated and we picked up eight new Spotters. We do Spotter Training in March because experience has shown that when scheduling Spotter Training for April and/or early May we are often pre-empted by Flood Operations. Since many ARES members seem to be Type "A" personalities it was no surprise that many arrived in Morris well over an hour early – we managed to find a local spot that had just opened up and had coffee.

Thanks to ARES PIO Jim Sutton, VE4SIG, there were two radio interviews about CANWARN done on Friday, March 21 – Radio Noon on CBC Radio with Marilyn Maki and the All News Drive on CJOB with Brett Megarry.

The participants in our 2014 Spotter Training session were: WPM Natalie Hasell VE4NAT; Tiffiny Taylor and Lynda Tityk from CoCoRaHS; and VA4s: BRD, CQD, MAC, RWT, AJG, VE4S GLS, MHZ, ALW, DWG, DDW, NQ, RIC, TRO, SYM, YYL, GWN, ADS, CY, KU, STS, GLS, DXR, VD, TTH, STL, DJS, HK, DPR, RDO and MBQ.

Natalie covered: Reporting, Safety, Thunderstorm Basics, Definitions & Statistics, What to Watch For and Myths.

I addressed Net Protocols or how to use a 2m transceiver to get a report to ARS VE4WWO, the Amateurs Station in the Prairie & Arctic Storm Prediction Centre in Winnipeg. Thanks to ARES PIO Jim Sutton, VE4SIG, for once again producing laminated Wallet Cards with the 1-800 number that Environment Canada doesn't seem able to supply anymore. A public version of my presentation is available at http://winnipegares.ca

Traffic Totals
March: 4
April: 6

– *Jan Schippers, VE4JS*

ONTARIO NORTH:

SM: Al Boyd, VE3AJB
Email: ve3ajb@vianet.ca
STM: Pat Dopson, VE3HZQ
Email: dopsonp@vianet.ca
SEC: Dave Hayes, VE3JX
Email: ve3jx@bell.net
OBM: Paul Caccamo VA3PC
Email: va3pc@ciinet.org
Website: http://ontario.racares.ca

MARCH-APRIL SM REPORT:

Greetings to all. It was nice to see so many Amateurs in Dayton this year at the Hamvention. I had the opportunity to stop by the RAC Booth and chat with many Canadian Amateurs.

Field Day was a great success here in the north with many groups participating in the event. Hats off to all of you.

Thanks again for all the work you do for Amateur Radio and public service.

ONN SEC Report
Dave Hayes, VE3JX

Our very capable DEC in Amethyst District sent me some information and links about cyberattacks and preparing for them. The National Security Agency (NSA) in Washington, DC is taking the threat very seriously. In fact, the US is spending billions of dollars to create Cyber Command offensive and defensive teams, according to a report in the *New York Times*. Fred also sent a link to a newspaper article which describes a four-day exercise that the Tennessee Emergency Management Agency (TEMA) conducted using the scenario of a national cyberattack. Amateur Radio/MARS was one of the tools of response for restoring communication links for messaging. Winlink was utilized in this setting. Fred's point was that, while using various facilities available to us that may involve the Internet, we also need to practise doing without in case we are affected by a similar scenario as used in Tennessee. Thanks Fred.

When you read this, Field Day will already be history. Nonetheless, I wish all of you in Ontario North (ONN) a successful and fun-filled weekend then. While it is not quite the same as a SET, Field Day teaches us practical skills that will come in handy during emergency situations, especially in the setting up and operation of a station, generators and antennas in a less-than-ideal situation. Field Day may also be an ideal venue for interesting others in our hobby as well as ARES. Prearranged publicity is also very valuable. Have yourselves a great time!

DEC for Albany reports:

I was asked by members of our Seniors' group in the Soo to mention their participation and contribution to ARES. Indeed, more than half of the local active members of ARES are seniors. You can count on them assisting during SETs and actual incidents.

Known as the Algoma Seniors Electronic Communicators, the group at the Seniors Centre on Bay Street in Sault Ste Marie is quite a gregarious and active bunch. Every Thursday afternoon, there is a get-together in the Amateur Radio room in the Seniors Centre with an average of more than a dozen attending each and every week. AEC Frank MacDonald, VA3MAX, is one of the spark plugs for this active group. When it comes time for our SET, it is members of this group that figure prominently in its successful implementation, and the ASEC club station has been used as a backup EOC station in the past.

If you are ever in the Soo on a Thursday, be sure to drop in and join us for coffee, ham talk, and even operate the fine station.

You will be more than welcome. Incidentally, it is an international group as several US Amateurs come across the bridge from Michigan to join us each week.

EC for Sault Ste Marie & Area, Brent MacMillan, VE3OTL, is busy organizing local ARES participation in a weekend parking lot exhibition of emergency organizations and their capabilities. Details of how that goes will be featured in the next TCA report. He and Dave Campbell, VE3EGC (EC for Echo Bay & Laird Township) are also heavily involved with Field Day planning and setup, as well as looking forward to attending the local CANWARN training session.

DEC for Killarney District, Stiig Larson, VE3LBX, reports:

"I am reporting to you on a recent visit to Sudbury's April ARES meeting. I attended a Sudbury ARES meeting this month and witnessed a presentation on FLDigi and NBEMS which included a demonstration on their laptops using handheld radios. Sudbury ARES pens were handed out."

Alan Viitala, VA3AJV, EC for Sudbury, reports:

"Thanks to the donated laptops from the City of Sudbury, we are now starting to learn and train with NBEMS and digital messaging for EmComm. Until now, our activities were lacking due to equipment needed so it's exciting to be able to finally get into a standard method of emergency communications that has already been used by many other ARES units!

I hope to begin recruiting new ARES members soon, reaching out to the Red Cross first with a demo and presentation. Now we can show them updated methods and equipment that would be used if ARES were to assist them."

Jim McLean, VE3LJM, EC for Manitoulin Island & North Shore reports:

"Members Igor Slakva, VE3ZF and Patric Dopson, VE3HZQ, representing the Manitoulin Amateur Radio Club Inc., organized the setup at Twilight Isle on Manitoulin Island and participated in the 17th Annual Ontario QSO Party 2014. This is always held on the third full weekend of April from 1800Z April 19 to 0500Z April 20, and 1200Z to 1800Z April 20."

Fred Lesnick, DEC for Amethyst reports:

"On March 1, the Lakehead ARC participated once again in providing communications for the Sleeping Giant Loppet which changed quite a bit this year due to the adverse weather conditions.

With that note on weather conditions CANWARN training will be starting up again across the Province and Thunder Bay and area will see training in June. We have already seen some very dangerous tornadoes in the US, and with the start of Hurricane season as well it looks to be a busy year for Emergency Services in the US. Thus training and preparedness are crucial for you, your family and community. So once again I ask, 'Are You Prepared', do you have your 72 survival plan in place?

Here are a few tips:

1) Remember to have spare batteries in the home, flashlights and have your 72-hour survival package(kit) ready to go.

2) Do not run generators indoors or attached garages.

3) Carry a blanket (sleeping bag), shovel, flares and tea lights in your vehicle just in case of a roadside emergency, and

4) Always make a travel plan or let someone know your itinerary and travel plans.

http://www.getprepared.gc.ca/index-eng.aspx

http://www.redcross.ca/cmslib/general/epweek72hour_guide_e.pdf

http://goo.gl/6oMu3S

Field Day will be coming up as well which gives all Amateurs a chance to field test their gear and see what they need or do not need to be prepared."

– Allan Boyd, VE3AJB

DECs reporting:
VA3s: PC
VE3s: LBX and FAL

ECs reporting:
VA3s: AJV and SPT.
VE3s: LJM, SUT, RQR and MXJ.

ONTARIO SOUTH:

SM: Ian Snow, VA3QT
SEC: Vacant
SBM: Brad Rodriguez, VE3RHJ
STM: James Davidson, VE3TPZ
Website: http://ontario.racares.ca

MARCH-APRIL SM REPORT:

With this part of Ontario in the grips of one of the most severe winters in living memory a lot of activities in the Section were curtailed. Much of my focus as Section Manager over the winter was the ARES Training Specification Working Group. This culminated in a four-day meeting which was held in Winnipeg from April 14-17, where the document was finalized in draft and it is now out to the Section Managers for a 60-day review period.

The Specification is a needs analysis that looked at each "job" an ARES group member could potentially be asked to perform and breaks down the associated tasks and required skill and knowledge. From this base we can now develop tailored "just-in-time" training packages that ECs can choose from to meet the group's specific mission, while at the same time the RAC Chief Field Services Officer can be confident that training is consistent across the Canadian ARES system.

The second annual Section ARES Leadership Seminar was held in the London Emergency Operations Centre on April 28, with a good turnout despite limited preparation time. The morning session was primarily updates on the training and other projects so that everyone had the "big picture". In the afternoon a MESH network was demonstrated and, using a coupled Wi-Fi router, several of the participants installed RMS Express on their laptops from the Winlink website and messages sent to cellphones in the room. Much thanks to the London Club and ARES Group for making arrangements and hosting the seminar.

Ontario Bulletin Manager Brad Rodriguez, VE3RHJ, has advised me that he will be retiring at the end of the year and is moving out of province. If you enjoy perusing Amateur Radio news sources and would like to "give back" to the hobby by compiling the weekly Ontario Bulletin, please contact me at va3qt@rac.ca.

Activity Reports

On March 17, DEC Brad Rodriguez, VE3RHJ, gave a presentation on ARES to the Guelph ARC, who have reactivated the Wellington Cty ARES group.

EC Wayne McLean, VE3WWM, of Dufferin Cty ARES, reported a busy April with participation in the Orangeville Home and Garden Show from April 4-6, the commencement of a Basic course on April 17, and training on the Winlink system.

On Sunday morning, April 27, 19 members of the Kitchener-Waterloo ARC assisted with the annual St. John Ambulance fundraising marathon. Please see the Public Service / ARES column on page 51 for more information.

DECs Reporting: VE3RHJ
ECs Reporting:
VE3s: VE3BTC, VE3LKD, VE3LGN, VE3RTE and VE3EQV.

OBS Reporting:
VE3GIO, VE3VBR and VE3XTA.

Traffic Totals:
March: VE3RHJ 16, VE3TPZ 6
April: Unavailable

ONTARIO EAST:

SM: Michael Hickey, VE3IPC
Email: ve3ipc@gmail.com
SEC: Vacant
STM: Vacant
OBM: Brad Rodriguez, VE3RJH
Email: ve3rhj@rac.ca
Website: http://ontario.racares.ca

MARCH-APRIL SM REPORT:

Well the wet spring is finally behind us and many plans for Field Day 2014 well tested and no doubt with challenges and lessons learned. The challenges make for well-remembered Field Days and much camaraderie bringing closer ties with fellow Radio Amateurs, new or well experience in radio communications. I hope that many clubs and groups have taken the opportunity to invite and receive municipal officials and tours given to the public at large, the only place from which new Radio Amateurs can come from.

I imagine that a number of you will be heading for the Pacific Northwest DX Conference and RAC AGM in BC from July 25 to 27. There you can meet the RAC President and other RAC officials and take in the DX Conference.

I wish everyone a great and fun-filled summer in which no doubt you'll be enjoying the radio hobby. Here are the ARES groups' reports for this Section.

Eastern Ontario ARES District Group reports:

LNL-ARES Group:
Submitted by AEC Norm, VE3VY for Coordinator Barrie, VE3BSB

The Lanark/North Leeds (LNL)-ARES Group performed their regular weekly nets on Wednesday evenings. VA3DOY has established an RMS Packet station with Internet connection making it the second Westport Gateway. The digital group at Westport has had several training/workshop sessions. VE3VY has suggested a discussion meeting be held at the Smith Falls Fleamarket regarding digital interoperability.

Ottawa EMRG/ARES Group:
Submitted by AEC Mike, VE3FFK for Coordinator Richard, VE3UNW

The Ottawa ARES/EMRG Group conducted their monthly repeater tests on March 5, with Dave, VE3KMV, doing the usual coordination of Sandy, VE3AAC, Tim, VA3PYC, Mike, VE3FFK, Paul, VE3CPH, Ron, VA3ACZ and Brian, VE3UU. Apart from the usual minor anomalies, all repeaters checked out fine.

The Ottawa ARES/EMRG Group conducted their monthly repeater test on April 2 with Ron, VA3ACZ,

Arthur, VA3BIT, Tim, VA3PYC, Bob, VA3QV, Paul, VE3CPH and Mike, VE3FFK, checking in and Dave, VE3KMV, controlling the net. There was some "crackling" in the audio of VE3EMV/east but otherwise all was well.

There was some participation in the Red Cross exercise "Eastern Shocker" on April 6, but it was not designed to have a large ARES component so there was little for EMRG / Ottawa ARES to do in it. Nevertheless, Tim, VA3PYC, Peter, VE3BQP, Mike, VE3FFK and Richard, VE3UNW, were able to assist somewhat. Even with this little amount of participation, a few "holes" in the notification procedure were found. For a complete report see page 49.

Prescott-Russell-ARES Group
Submitted by EC Lance, VA3LP

The Prescott-Russell (PR)-ARES Group is trying to find some nice weather to initiate some much needed maintenance on their two repeaters in Prescott-Russell counties, VE3PRV and VA3PRA. At the same time the digipeater for PR-ARES will be installed and tested. Broadband Hamnet is still being discussed and several WRT54 routers have been acquired and the software changed for MESH. Some VOIP SIP phones have been found and will be used to help test and evaluate MESH as a system for ARES.

The Prescott-Russell (PR)-ARES Group participated again this year in the Clarence-Rockland Classic bicycle race. This is a gruelling 85 kilometre race over the back roads of the city of Clarence-Rockland. This year was wet and muddy and a couple of detours had to be put in place for the race.

At the front of the race in the lead vehicle was Jean, VE3OKK and Jean, VA3ZJS. They used voice to pass race traffic and APRS was used to keep track of the lead car back at HQ. Chris, VA3NKE, was in the safety vehicle at the back of the race to keep tabs on the last riders and close down checkpoints as they passed them.

EC Lance, VA3LP, was net control at HQ and provided data to the race coordinators on the status of the race. Norm, VA3NPL, Jim, VA3KV, George, VA3SUS, Ron, VA3RRZ and Ray, VA3OMM and his wife Suzanne, leapfrogged around the track from checkpoint to checkpoint to provide safety at high traffic intersections throughout the race. In the end, no bicyclist was lost and the race was a success for both the race organizers and the PR-ARES Group.

Renfrew County East ARES-Group
Submitted by Group Coordinator Debra A. Bee, VE3IEH

After encountering multiple and frustrating difficulties with her laptop, Debra finally was able to complete the online course for the IMS-100, introduction to (the) Incident Management System. Successful completion was required as a prerequisite to taking the IMS-200, Basic Emergency Management (BEM) course. The IMS-200 course is given by local the (EMO) Field Officer of the Office of the Fire Marshal and Emergency Management Ontario (OFM/EMO).

The Renfrew County East (RCE)-ARES Group had an active April. EC Debra, VE3IEH, attended the Incident Management System course IMS-200 organized by Atomic Energy Chalk River Laboratories (AECL) in Deep River on April 3 and 4. Bob, VE3YX, EC for RCW-ARES, was also a participant. The two days were facilitated by the local (EMO) Field Officer for the Office of the Fire Marshall and Emergency Measures (Ontario) (OFM/EMO) and the time was jam-packed with information, mini-tests, exercises and a final examination. The choice to take the exam on either an individual or a team basis was presented to the group and Debra and Bob chose to form a team with four other participants. This team was very successful and certificates were provided to all six members.

While the IMS-200 Basic Emergency Management (BEM) course provided an excellent overview of the history, theory, strategy and implementation of the Incident Management System in the province, it was only minimally directly relevant to the ARES mandate. The EC feels that it was certainly valuable as a tool to understand how emergency situations are handled. There are other level courses being developed for this system in addition to the half-day of instruction designed to allow the successful participant to teach IMS-200.

On April 6 an exercise was held in Carleton Place between the Red Cross and ARES groups from Ottawa and up the valley and including members of the LNL-ARES group. For a complete report see the article on page 49.

Renfrew County West ARES-Group
Submitted by Group Coordinator Bob, VE3YX

The Renfrew County West (RCW)-ARES Group had 4 nets this month.

Debra, VE3IEH, Dom, VE3DGZ, and Bob, VE3YX, took the IMS-200 course provided by EMO on the April 3 and 4. The course is being given in Deep River primarily to AECL personnel, but ARES was provided with a few positions.

The Renfrew County West (RCW)-ARES Group held 5 regular Wednesday evening nets in April.

The Group participated in a Red Cross exercise on April 6 that included activities in Pembroke, Carleton Place and Ottawa. For a complete report see the article on page 49.

Stormont, Dundas & Glengarry-ARES Group
Submitted by Group Coordinator Earl, VE3IMP

The Stormont Dundas & Glengarry (SD&G)-ARES Group continue to read the ARES bulletins each Monday, at 7 pm local, on the club's 2m net conducted on VE3SVC (147.180MHz.+). Amateurs are also asked to then check in on the VE3MTA (UHF) repeater. Occasionally, we also call for checkins on a new ARES repeater located in Cornwall (VE3VSW) and VE3SVR in Morrisburg. This process confirms the serviceability of nearby SVARC repeater systems at least once a week, should they be required by SD&G ARES.

On April 27, a record 17 Amateurs participated in the Raisin River Canoe Races providing communications for St. John Ambulance. This is the third year we have provided this kind of communications support for which St. John Ambulance was grateful. Operators staffed seven checkpoints and other locations to be in a better position to call for help should a canoeist need first aid during this 32 kilometre race from St. Andrews West to Williamstown. A crossband repeater was established but had only marginal results.

Districts reporting:
Eastern Ontario

ECs (GCs) reporting:
VE3VY, VE3FFK, VE3YX, VA3LP, VE3IMP and VE3IEH.

DECs reporting: VA3LP.

OBS reporting: VE3YX, VE3KII, VE3VY, VE3ZJS and VE3IQZ.

– 73, Michael Hickey, VE3IPC

ONTARIO GTA SECTION REPORT

SM: George Duffield, VE3WKJ
ASM: Vic Henderson, VE3FOX
ASM: James King, VE3ETZ
SEC: Rick Harrison, VA3NV
STM: Vacant
SBM: Brad Rodriguez, VE3RHJ

MARCH-APRIL SM REPORT:

With summer, there is usually a decrease in club activities and an increase in special events which means the ARES groups are active. The biggest of the ARES events is of course Field Day. This is one of the highlights of a club's year and a chance for ARES group coordinators to show club members not often involved in ad hoc setups just how much fun it is to be hanging antennas in trees and operating in a tent during a rainstorm. The Contesters show their expertise by going on air and demonstrating their skills at making contacts with alacrity and recording high scores. The ARES team builds the site and shows its own not to be sneezed at operating skills. I hope everyone enjoyed Field Day and all the events, such as a barbecue that might have been added to it to make the day more enjoyable. By the way, Field Day demonstrates the way that interoperability works, operators with skills in one area, assisting operators with skills in another, working together; communicating, internally and externally, for the benefit of all. This format of interoperability also describes what is happening in Emergency Management in the province of Ontario and certainly in the GTA Section.

In our case, operators from across the Section come together on a regular basis, every other month, to share ideas, demonstrate advancements, discuss mutual challenges, to brainstorm ideas, to discuss policy and to work together. As I write this, we have just completed the April meeting where we had a briefing on the work of the National Training Working Group. This team has put together one of the most comprehensive training documents that I have ever seen. No doubt, you will hear and see more specific information about the work the team has done as it gets filtered down from your Section Manager.

The plan allows an individual to train to the level at which he or she is comfortable. Nothing is mandatory. Only those driven few will go all the way to become operators capable of being deployed for provincial, national or international disasters. The rest of us will be somewhere in the middle. What is important is that the training information is now available on the RAC website. It will at some point in the future be developed with lesson plans for each segment so that ARES Trainers will be able to impart the information to those interested in an organized fashion. The National Training Working Group has done a fabulous job, donating countless hours of personal time to bring it to fruition. On behalf of all ARES groups in the GTA Section, thank you! We will try to reflect your vision well in our training programs.

There have been changes in the Section since the last issue of TCA. Glenn Marret, VE3CEZ, who has been DEC in GTA West for the past year and a half, has asked to be relieved of his duties. Glenn has been a tremendous asset to the Section. We will miss his commitment and his creativity. We will also look forward to his return to the Field Organization at a future time.

SEC Rick Harrison, VA3NV and I travelled to Pickering for a meeting with members of the South Pickering and Oshawa North Shore and Whitby clubs to begin the task of forming a new ARES presence for Durham Region, our eastern boundary area. We look forward to good progress there in the coming weeks. Back in Halton County, the South Halton ARES group is relinquishing some of its territory and will focus more on the area surrounding the town of Milton, Canada's fastest growing community. As a result, Oakville ARC will re-establish its ARES group and will be responsible for the Town of Oakville. This brings to four the number of ARES groups in Halton County. Oakville ARES hopes to add to the digital expertise already resident in the county.

To conclude, an exceptional French engineer and philosopher, Pierre Teilhard de Chardin had this thought: "It is a pleasant and dramatic spectacle; that of mankind divided to its very depths into two irrevocably opposed camps, one looking toward the horizon proclaiming with all its new found faith, 'We're moving!', and the other, without shifting its position obstinately maintaining, 'Nothing changes! We are not moving at all'. As ARES operators and RAC members, we must make certain that we are standing in the right camp. Look, we are moving!

OBS reporting:
VE3JUZ, VE3SHM

– George Duffield, VE3WKJ

MARITIMES:

SM: Craig Seaboyer, VE1DSS

MARCH-APRIL SM REPORT:

It has been a busy two months with spring arriving. I made contact with the Truro Amateur Radio Club (TARC) and invited myself to their monthly meeting on May 12. There were 15 members in attendance and a very active club. After listening to the regular meeting, I was asked to speak on behalf of RAC and the Antigonish Amateur Radio Club (AARC). I asked for help receiving regular monthly reports or updates from their club to inform me of the club's activities. Without these updates, I , as the Section Manager, have very little to report.

I am now formally asking all clubs within the Maritime provinces to regularly update myself of their clubs' activities if they wish to be part of this report. In the past I have attempted to report activities by researching them on the net but some club websites are not up-to-date. I will try to reach out to individual clubs, but in case I miss some please send club news and activities to me at ve1dss@rac.ca.

I would suggest, as TARC has done, that the clubs appoint one member to do this task so all information that the club wishes to have reported gets to me. Reports will be summarized within my Section Manager's report. I know that many of the clubs in my area are busy contributing to the wellbeing of their community and I would like to promote them, but without regular reporting it is impossible.

I will be at the Halifax Amateur Radio Club's annual fleamarket on May 31 along with several other RAC representatives.

The Antigonish Amateur Radio Club (AARC) held another exercise in the community of Lakevale, Nova Scotia for Emergency Preparedness Week on May 11. An HF portable station was set up and contacts were made in several different bands. The club's website can be found at ve1rti.ca.

– Craig Seaboyer, VE1DSS

NEWFOUNDLAND AND LABRADOR:

SM: Vacant

MARCH-APRIL SM REPORT:

Oops, I have to apologize. What a difference one little letter makes. I've been taking heat, in a friendly way, from Carl Milley for giving, in the last TCA Report, his call sign to Lester Gould, the Evening Net coordinator. Lester's correct call sign is VO1UG and not VO1UL, so if a NL sector Amateur has concerns with the Evening Traffic Net, Lester is the one to contact. Carl gave me a call and asked if I was working for Industry Canada or if I was relocating him to Ramea. I didn't have the heart to let him know that the mistake was a Freudian slip and the fellows on the Great Northern Peninsula were trying to get rid of him.

On the subject of nets, there's nothing some of the fellows wouldn't do to participate. Cod Jigger Net coordinator Bill, VO1WB, had an ATV accident that resulted in him making a trip to the HSC in St. John's for corrective foot surgery. Dave, VO1VCE and Bill concocted a way for him to check in from his hospital bed. At 9:30 am local time, Bill would use his cellphone to call Dave. Dave, with his rig set to 7085 and with VOX enabled, made it possible for Bill to copy and participate in the proceedings. Ingenuity personified! Dave, the master of comedy, pointed out that Bill's foot problems were the result of an accident and not from putting his foot in his mouth on too many occasions, unlike himself.

Details for the Hamfest in Gander have been finalized for September 6 and 7. The committee has put a fair bit of effort in to this and deserve our support. The registration fee is $10 per Amateur and $15 per person for the BBQ supper on Saturday evening. Please forward your registration fees to Ira Stacey, VO1IRA, as soon as possible. His mailing address can be found in the Coming Events section on page 63. There are quality prizes that have been acquired; this alone is enough incentive to pay the registration fee and come along. This gathering is not sponsored by any club and is solely a gathering of Amateurs for fun, sharing and meeting other Amateurs you may have talked to but have never met. Anyone can add something to the program or bring along items for a swapshop, etc to add to the activities.

Are you aware that NL Lieutenant Governor Frank Fagan is an Amateur? His call sign is VO1FFF and from what I've been told he was quite active back in the day especially participating on Field Days. I wonder if we should offer to throw up a G5RV antenna for him down at Government House so that he can get back on, ha. Considering the location, what a place to set up a special event station and have him involved if permission were given?

Summertime Amateur visitors in the St. John's area with VHF capabilities are invited to use VO1NTV, 147.060 – (notice the negative offset) for local ragchew, VO1TZ, 145.090+ for digital and VO1GT, 146.940 – for linked trans-island communication extending to the Lewisporte area. Many thanks to the fellows in the AVRAC club who are keeping this aspect of the hobby alive and well.

My thanks go to Ira Stacey, Carl Milley and Dave Myrick for their contributions to this report. Remember, Amateur Radio is a hobby; have fun with it.

Here are the latest Net reports thanks to Ira:

Cod Jigger
March 444
April 493

Evening
March 999
April 851

Charlie Marsh, VO1VZ
NL Section Bulletin Editor

RAC FIELD ORGANIZATION REPORTS

National Traffic System (NTS) Net Reports

Net (Manager)	Sessions	QNI	QTC
March 2014:			
Avonlea ARG	21	491	88
BCEN (VE7XLH)	31	202	29
BCYTN (VE7WJ)	31	514	65
CECA (VE7GN)	4	46	8
MEPN (VE4LB)	30	737	0
MMWXN (VA4GD)	31	517	2
MRS (VE4HK)	9	294	0
MSMN (VE4AEW)	21	530	0
NSARC	29	135	0
Sask ARES	5	200	0
Sask Evening Phone/CW	29	176	0
Sask Wx	29	621	0
TCN (VA7TA)	5	345	0
April 2014:			
BCEN (VE7XLH)	30	296	57
BCYTN (VE7WJ)	30	525	47
CECA (VE7GN)	4	46	8
IRLP 9300	21	525	68
Laurentian	30	451	1
MEPN (VE4LB)	29	636	2
MMWXN (VA4GD)	30	555	4
MRS (VE4HK)	8	263	0
MSMN (VE4AEW)	22	558	0
OPN (VE3XRC)	30	102	16
TCN (VA7TA)	6	222	0

COMING EVENTS

THE HAMFEST AND FLEAMARKET CALENDAR

The following events are listed by date. Some dates and details are tentative. For more Hamfests and Fleamarkets please go to http://rac.eton.ca/events/upcoming.php

SASKATCHEWAN HAMFEST 2014
Sponsored by the Saskatchewan Amateur Radio League Inc.
Date: Saturday, July 5.
Time: Vendors 7:30-8:45 am setup; Public will be allowed in at 8:30 am but rope drops at 9 am.
Place: Moose Jaw, Saskatchewan;
Moose Jaw Western Development Museum.
Description: Fleamarket and AGM for SARL. Tables free but admission charges apply.
Cost: $7.50 each if non SARL & Spouse Member. SARL members and spouses free.
Talkin: 146.34/94.
Info: Please contact Val, VE5AQ at 306-693-6127 or ve5aq@sasktel.net.
Web: http://www.sarl.ca

51ST INTERNATIONAL HAMFEST
Date: Saturday, July 12.
Place: The US Lodge in the International Peace Garden. South of Brandon on the Canadian USA border.
Description: Fleamarket, Rabbit Hunts, Mobile Judging, Homebrew Contest, Prizes, Food Concession, Saturday night Dance, Free Saturday Lunch for those registered. Campers, identify yourself at gate for special camping rates.
Cost: Registration fee is $15 per person.
Info: Contact: Richard Holder, VE4QK, ve4ihf@mts.net or 204-268-1702. Please see the article on page 23 of the March-April 2014 TCA for additional information and visit our website for updated information.
Web: www.mts.net/~holderr/ihf.htm

40TH ONTARIO HAMFEST
Sponsored by the Burlington ARC
Date: Saturday, July 12.
Time: Inside & Commercial Vendors 7 am and Tailgate Vendors 8 am at the Robert Street Gate; Public 9 am at Thomas Street Gate only.
Place: Milton, Ontario; at the Milton Agricultural Fairgrounds.
Cost: Public $ 7; Tables: $14 each
Tailgate Permit $ 7 per space.
Talkin: 146.520 Simplex.
Info: Coordinators Bob Parker, VE3OIP, barc.ontariohamfest@gmail.com.
Vendor Coordinator: Norm Freidin, VE3CZI ontariohamfestvendors@gmail.com
Mail Vendor reservations to: Ontario Hamfest Vendor Registration, 2129 Larabee Court Burlington, ON L7P 3S3, Phone: 905-335-8962
Web: http://www.barc.ca/Ontario%20Hamfest.htm

VE4XSI SPECIAL EVENT
Commemorating Sigurjon Isfeld, the man behind the Shackleton dogs
Date: Saturday, July 26 to Monday, August 4.
Time: 1400Z to 2300Z.
Place: Gimli, Manitoba.
Description: In July 1914, Sigurjon left Gimli, Manitoba with 100 dogs and delivered them to Sir Shackleton in England for his Imperial Trans-Antarctic Expedition. To commemorate the event VE4XSI will operate on 14.250, 21.250, 28.350 and 7.200 MHz as band conditions dictate.
Info: Look in QRZ under VE4XSI or contact ve4xsi@rac.ca.

CANAL DAYS SPECIAL EVENT VE3WCD
The Niagara Peninsula Amateur Radio Club (NPARC) will again be operating a Special Event Station as part of the Canal Days Marine Heritage Festival held annually in Port Colborne, Ontario.
Date: The Special Event Station will be operating Saturday, August 2 and Sunday August 3 from 1300 to 2100 UTC on or about 7.250 MHz, 14.250 MHz and 21.250 MHz. Come and join us on the air.
Description: This event marks the long history of the Welland Canal which provides a bypass around Niagara Falls for ships travelling between Lakes Ontario and Erie. The Festival has many interesting displays, boat cruises and entertainment for people of all ages. The Special Event Station VE3WCD will be set up close to the canal and two of the navigational lighthouses CAN 764 and CAN 765 which are of interest to lighthouse chasers.
Info: Contact Doug Frame, VE3JDF at jdframe@sympatico.ca
Web: http://www.nparc.on.ca

CG3C SPECIAL EVENT STATION
Celebrating The 150th Anniversary of the Charlottetown Conference
Sponsored by Robert Emerson, VE3RHE
Date/Time (UTC): Tuesday, August 26, 15:00 to Thursday, September 25 23:59.
Frequencies: All HF bands with a focus on 12m and 17m. QSL via VE3RHE (Direct or Bureau). Send QSL request and SASE (or 1 green stamp for USA, 2 green stamps for International) to Robert Emerson, VE3RHE, 6950 Summer Heights Drive, Mississauga, Ontario, Canada L5N 7E9.
This will be a paper operation. LOTW will be uploaded at a later date.
Information: ve3rhe@rac.ca
Web: www.canada-150th.ca

OTTAWA (CARP) 17TH ANNUAL HAMFEST
Sponsored by the Ottawa ARC
Date: Saturday, September 6.
Time: Building Vendor setup: 7:30 am; Tailgaters: 8 am; Indoor Fleamarket open 9 am to noon.
Place: Ottawa (Carp), Ontario; Carp Agricultural Fairgrounds (in the W. Erskine Johnston Arena at the north end of the fairgrounds), 3832 Carp Road. See the ad on page 25 for more info.
Description: The region's largest fleamarket and hamfest. All of the big Amateur Radio retailers are going to be there! Major doorprize draws! Breakfast, coffee, and lunch concession. Volunteer organizations and displays. We also have on-site Amateur Radio licence exams.
Cost: $6 General Admission; $12/table (plus admission) if booked before September 1 (but $15 after that to cover extra table costs), $5/tailgate (plus admission). Please book tables early to ensure a reservation.
Talkin: VE2CRA, 146.94-, 100 Hz
Info: Ed Sich, VE3WGO, 613-853-2281 (please leave a message).
Email contact: fleamarket at oarc.net
Web: http://www.oarc.net/fleamarket

NL & LABRADOR HAMFEST
Date: Saturday, September 6 to Sunday, September 7.
Time: Saturday, 10 am until the evening. Sunday: Amateurs will gather at a location in Gander to be advised later for breakfast prior to leaving for our trip home.
Place: Gander, Newfoundland;
at the Masonic Lodge.
Description: Tables will be provided for Amateurs who wish to display swap shop items to sell. Derrick Drover, VO1YE, will DJ at the event with some live music as well those who wish to have a dance. During the day prizes will be drawn for with a selection of items donated by companies who have provided items for this event, and donations from other sources.
Cost: Registration $10; Barbeque $15 per person includes Prime Rib Steak, Salads, Coffee, Tea and or soft drink with dessert.
Talkin: VO1GLR 147.180+ or VO1ADE 146.880- also HF will be active on 80m 3.740 and 40m 7.085.
Info: Ira Stacey, VO1RA, vo1ira@yahoo.ca. Everyone attending will be required to have the registration fee and meal paid for by August 23. Please send payment to: Ira Stacey, 9 Spruce Grove Avenue, Goulds, NL A1S0A5
Web: http://rac.eton.ca/events/detail.php?event_ID=1664

MONCTON AREA AMATEUR RADIO CLUB ANNUAL FLEAMARKET
Sponsored by the Moncton Area ARC
Date: Saturday, September 20.
Time: Vendors 8 am; Public 10 am.
Place: Riverview, New Brunswick; Riverview Lions Club, 701 Coverdale Road.
Cost: $4 per person.
Talkin: 147.090+.
Info: Charles Levasseur, VE9CEL, ve9cel@rogers.com
Web: http://www.maarc.ca

LONDON ARC 37TH ANNUAL HAMFEST
Sponsored by the London ARC
Date: Sunday, September 21.
Time: Vendors: 8 am; Public 9 am to noon.
Place: London, Ontario; at the Hellenic Community Centre, 133 Southdale Road West N6J 2J2.
Description: Commercial Dealers; Bring & Buy: Let LARC sell your item(s) at our club table. Special Draws: two Radioworld Gift Certificates. Free Parking; Air Conditioned; Wheelchair Accessible with Handicap Washrooms.
Cost: Admission $8 (age 10 and up); Tables: $20; Extra tables $15.
Info: LARChamfest@gmail.com; Phone: 519-455-9465 (Ruth)
Make Cheque or Money Order Payable to "London Amateur Radio Club Inc" (not to Ruth Dahl) and mail to: Ruth Dahl, VE3RBO, Apt #805 700 Wonderland Rd N, London ON N6H 4V3
Talkin: VA3LON. 147.060 PL 114.8
Web: http://www.larc.ca/index.php/hamfest-information

COMFEST 2014
Sponsored by the Delta Amateur Radio Society
Date: Sunday, September 28.
Time: Public 10 am.
Place: Delta, British Columbia; 1720 56 Street Tsawwassen; just south of highway 17.
Cost: Public $5.
Description: Annual ham radio swap meet.
Info: Contact: gi@deltaamateurradio.com
Web: http://www.deltaamateurradio.com

HAMILTON ARC ANNUAL HAMFEST
Sponsored by the Hamilton ARC
Date: October 4.
Time: Vendors: 7 am; Public 9 am to noon.
Place: Ancaster, Ontario; 630 Trinity Road L0R 1R0 at the Ancaster Fairgrounds, (southwest corner of highways #52 and #53, just west of Ancaster). Please take note of the new venue "Old School Building" (south of the Concessions Building that has been used in previous years).
Cost: Public $7; Tables $12 with one chair per table. Mobile Food Vendor on site.
Info: General information Paul Fleck, VE3HTF, at ve3htf@hamiltonarc.ca;
for tables / vendors contact Mardy Eedson, VE3QEE, at ve3qee@hamiltonarc.cathe
Updated information will be posted as it becomes available on the website
Web: http://www.hamiltonarc.ca/activities/harc-hamfest/

CK3Q – 150TH ANNIVERSARY OF QUEBEC CONFERENCE
Sponsored by Robert Emerson, VE3RHE
Date: Saturday, October 11 to Monday, November 10.
Place: Mississauga, Ontario.
Description: Special Event Station CK3Q celebrating the 150th Anniversary of the Quebec Conference. Expected frequencies are 28.490, 21.290, 14.290. Hopefully I will be operating on 12m, 17m, and 40m as well. Visit our website for updates. QSL Cards will be available via VE3RHE after the event (Bureau or direct).
Info: Please contact Robert at ve3rhe@gmail.com for additional details.
Web: http://canada-150th.ca

SARA FLEAMARKET
Sponsored by the Southern Alberta Repeater Association
Date: Saturday, October 11.
Time: Vendors 10 am; Public 11 am.
Place: Calgary, Alberta; Eastside City Church, 1320 Abbeydale Drive SE.
Map: http://411.ca/business/map/6005347
Description: Popular SARA Flea Market with: Free Parking; Free Coffee; Snack Bar, with Famous SARA Dogs; Commercial Dealers.
Cost: Vendors & Public $5; Tables $10 each.
Talkin: VE6OIL (146.610 -600) No Tone
Info: For more information or to reserve tables, call Ken Oelke, VE6AFO at 403-226-5840 or ve6afo@3web.com.
Web: http://saralink.ca

MONTREAL SOUTH SHORE HAMFEST
Sponsored by Club Radio Amateur Rive-Sud de Montréal
Date: Saturday, October 18.
Time: Vendors 6 am; Public 9 am.
Place: Longueuil (10 minutes from downtown Montreal); Place Desaulniers, 1023 Taschereau Boulevard.
Description: The biggest Hamfest in Quebec. Restaurant. Free parking.
Accessible to handicapped persons
Cost: Tables $10 (individual entry(s) not included); Public $7.
Info: Martin Fournier, VE2DNF, phone: 450-466-2810, email hamfest@ve2clm.ca
Talkin: 145,390 (-) CTCSS 103,5 MHz, VE2RSM.
Web: http://www.ve2clm.ca/articles.php?lng=fr&pg=120

WINNIPEG ARC FALL FLEAMARKET
Sponsored by the Winnipeg ARC
Date: Sunday, October 19.
Time: Coffee and snacks: 9:30 am; Vendors: 9:45-10:30 am; Public: 10:30 am; Prize Draws: 11:30 am.
Place: Winnipeg, Manitoba; at the Heritage Victoria Community Club, 950 Sturgeon Road.
Description: Winnipeg's favourite gathering of old and new hams for socializing and a Fleamarket.
Cost: $5 per person; Tables: $5 each for WARC members, $10 for everyone else.
Info: Contact Dick Maguire, VE4HK, 204-256-3143 or ve4hk@rac.ca for further information. To book your table contact Ruth, VE4XYL at 204-837-6915 or ve4se@mymts.net.
Talkin: 147.390+ offset 127.3 tone.
Web: http://winnipegarc.org/flea_market.html

THE 38TH ANNUAL YORK REGION HAMFEST
Sponsored by the York Region ARC
Date: Saturday, November 1.
Time: Vendors 6:30 am; Public: at 7:30 am a covered indoor area opens for the general public, with free coffee and tea. Doors open to the sales area for the general public at 9 am.
Place: Markham, Ontario; Markham Fairgrounds, 10801 McCowan Road.
Description: Vendors galore in two separate halls, plus a separate hall for admissions and refreshments. Wide aisles for scooters and wheelchairs. Exhibits and demonstrations. DXCC, WAS & VUCC Card Checking. Licensing Examinations (register with Hamfest Coordinator prior to Hamfest to ensure we bring enough exams.)
Cost: $ 7 admission includes a ticket for the door prize draws every 20 minutes. Grand Prize tickets are $4 each, three for $10. Tables $28; all tables are 8-feet long.
Talkin: VE3YRA 145.350 MHz(-) T: 103.5 Hz.
Info: Email yrarc.hamfest@gmail.com
Web: http://yrarc.org/index.php/our-hamfest

MAPLE RIDGE SWAP MEET
Sponsored by the Maple Ridge ARC
Date: Sunday, November 2.
Time: Vendors 7:30 am; Public 9 am; Open For pancake breakfast 8 am. Concession will remain open during the event.
Place: Pitt Meadows, British Columbia; 12460 Harris Road, one block south of the Lougheed Highway in the old REC Building
Description: Come one come all! Ham Radio & computer Swapmeet. The largest in the Fraser Valley. Great prices lots of stuff.
Cost: Tables $20 includes 1 entry and a chance to win a radio; Public $5 includes chance to win a radio.
Talkin: 146.800 -600 + Tone 156.7.
Info: Nick 604 465-9476 or ve7te@mrarc.net.
Web: http://www.mrarc.net

XM3G – 200TH ANNIVERSARY OF THE TREATY OF GHENT
Sponsored by Robert Emerson, VE3RHE
The Treaty of Ghent was signed in Ghent, Belgium and ended the War of 1812.
Date: Saturday, December 6 to Monday, January 5.
Place: Mississauga, Ontario.
Description: Expected frequencies are 28.490, 21.290, 14.290. Hopefully, I will be operating on 12m, 17m and 40m as well. Visit canada-150th.ca for updates.
Info: Please email Robert at ve3rhe@gmail.com. QSL Cards will be available via VE3RHE after the event. (Bureau or Direct)
Web: http://www.canada-150th.ca

RADIO AMATEURS OF CANADA – MAPLE LEAF LEGACY CIRCLE
RADIO AMATEURS OF CANADA – CERCLE DES LÉGATEURS MAPLE LEAF

Your Personal Legacy: Making A Difference for the Future of Amateur Radio

RAC would like to recognize and honour Amateur Radio operators who have made the ultimate gift by voluntarily including Radio Amateurs of Canada in their will or other estate plans by welcoming them into the RAC Maple Leaf Legacy Circle.

One of the most important matters that everyone must manage and establish at some point in life is proper financial due diligence in estate planning for your family and loved ones.

One may also choose to express their gratitude to those organizations that meant the most to you in your life.

Professional advice should be sought in estate planning and your legal rights and tax laws must be considered when planning which estate vehicle best meets your needs. Your goals and priorities can then be consolidated into a customized plan.

RAC is well aware of many testimonials whereby Amateur Radio played a very important role in many people's lives as a fulfilling hobby and for some it even became a stepping stone to their financial success in professional life.

Choosing to enroll in this RAC program is a very thoughtful and generous action we wish to recognize.

RAC Maple Leaf Legacy Circle Benefits:

- Custom-designed RAC Maple Legacy Circle pin with engraved call sign
- Two automobile window decals
- Personalized certificate (signed by the RAC President)
- Credit for purchasing RAC items

Contact RAC for further information:

1-877-273-8304 – raccomms@gmail.com

The Radio Amateurs of Canada Inc., is a not-for-profit organization holding the following registration information:

Corporation Number 2858592
Business Number (BN) 899715189RC0001
Governing Legislation Canada Corporations Act

Votre Legs Personnel : Assurer pour longtemps un meilleur avenir au radioamateurisme

RAC aimerait rendre hommage aux radioamateurs qui ont décidé de faire de Radio Amateurs of/du Canada un de leurs légataires légaux par l'expression testamentaire de leur volonté ou autrement, et ce en leur souhaitant la bienvenue dans le Cercle des légateurs Maple Leaf de RAC.

Une des choses les plus importantes que chaque personne a à décider et gérer à un moment donné de sa vie est la juste valeur des biens et immeubles qu'il souhaite léguer à sa famille et à ceux qu'il aime.

Vous pouvez aussi choisir d'exprimer votre gratitude envers des organisations qui signifient beaucoup pour vous.

On doit alors rechercher un avis professionnel en matière de biens et immeubles. Vos droits légaux, taxes et lois doivent être prises en considération au moment de planifier ce qui vous convient le mieux. Vos buts et priorités doivent être conciliés dans un plan qui respecte vos intentions.

RAC est bien conscient des multiples facteurs qui démontrent le rôle très important que le radioamateurisme joue dans la vie de beaucoup de personnes à titre de hobby principal et, pour plusieurs, jusqu'à devenir une rampe de lancement pour leur succès financier et leur vie professionnelle.

Choisir d'adhérer au programme de RAC est donc une difficile mais généreuse décision. Nous le reconnaissons.

Les bénéfices du Cercle des légateurs Maple Leaf de RAC :

- Épinglette du Cercle des légateurs Maple Leaf gravée à votre indicatif d'appel
- Deux décalques pour les fenêtres de votre voiture
- Certificat personnalisé (signé par le président de RAC)
- Crédit à l'achat d'articles chez RAC

Communiquez avec RAC pour plus d'informations :

1-877-273-8304 – raccomms@gmail.com

Radio Amateurs of/du Canada inc. est une organisation sans but lucratif enregistrée sous les désignations et numéros suivants :

Corporation 2858592
Affaires 899715189RC0001
Gouvernement Loi sur les corporations du Canada

RAC's repeater directory goes Social! Now works with EchoLink and APRS on Android. New features coming this Summer to iOS!

RFinder - The Official Repeater Directory of RAC. Support RAC by choosing RFinder as your repeater directory.

Find RFinder in Google Play, the Apple App Store on your iPhone/iPad/iPod Touch or on the web at www.rfinder.net for only $9.99[usd]. Use RFinder in your favorite radio programmer such as RT Systems or CHIRP or access it at http://web.rfinder.net. New Social functions let you post your postion and repeater you are monitoring to APRS. Your net control will love it! Finding hams monitoring machines has never been easier!